

Changing Images of Man

A Comprehensive Study

By **O. W. Markley** (Project Director) and **Willis W. Harman** (Project Supervisor)

Originally published as SRI Report (1974)

Pergamon Press Edition (1982)

Systems Science and World Order Library
General Editor: Ervin Laszlo

Staff of and consultants to THE CENTER FOR THE STUDY OF SOCIAL POLICY/SRI INTERNATIONAL
Joseph Campbell, Duane Elgin, Willis Harman, Arthur Hastings, O. W. Markley, Floyd Matson, Brendan O'Regan and Leslie Schneider

Foundational Quotes on Urgency and Images

"I do not wish to seem overdramatic but I can only conclude from the information that is available to me as Secretary-General that the Members of the United Nations have perhaps ten years left in which to subordinate their ancient quarrels and launch a global partnership to curb the arms race, to improve the human environment, to defuse the population explosion, and to supply the required momentum to development efforts. If such a global partnership is not forged within the next decade, then I very much fear that the problems I have mentioned will have reached such staggering proportions that they will be beyond our capacity to control."

U Thant (1969)

ref: p. 6

"Awareness of ideal values is the first step in the conscious creation of images of the future and therefore the creation of culture, for a value is by definition that which guides toward a 'valued' future..... Any student of the rise and fall of cultures cannot fail to be impressed by the role in this historical succession by the image of the future. The rise and fall of images of the future precedes or accompanies the rise and fall of cultures.... In the end, the future may well be decided by the image which carries the greatest spiritual power."

Fred Polak (1973)

ref: p. 6

"Much advance, both in biological evolution and in psychosocial evolution, including advance in science, is of course obtained by intervals something like crystallization from a supersaturated solution occurs, as when science arrives at an entirely new concept, which then unifies an enormous amount of factual data and ideas, as with Newton or Darwin. Major advances occur in a series of large steps, from one form of organization to another. In our psychosocial evolution I believe we are now in a position to make a new major advance."

Sir Julian Huxley (1968)

ref: p. 6

Purpose, Background, and Method

This study explores the conceptual foundations of thinking that might support a transition to a more desirable future society, focusing on "images of the nature of man in relationship with the universe."

Purpose

To identify image changes needed for a desirable future; to chart conceptual premises underlying Western society; to discover how past images led to our industrialized society with its crisis-level problems; and to explore what types of images are needed for a post-industrial future. *(ref: Intro Pergamon, pp. xvii–xx)*

Background

Emerged from SRI's Educational Policy Research Center (EPRC) futures research, which identified concerning trends in plausible future histories. This led to the creation of the Center for the Study of Social Policy, with support from the Charles F. Kettering Foundation seeking "high leverage" ideas for beneficial societal effect. *(ref: Intro Pergamon)*

Method

"Bricolage" approach (Levi-Strauss): drawing on diverse materials and tools to exhibit important relationships through metaphor; multidisciplinary team exploring connections across humanities, social sciences, systems theory, and physics. *(ref: Intro SRI, pp. xxi–xxiv)*

Limitations

Focus primarily on Western/American context; notable exclusions include in-depth treatment of modern art, literature, theology, and mass movements. Instead, emphasis on aspects most involved in the rise and potential transformation of industrialism. *(ref: p. xxii)*

Guide to the Study

Chapter Map

- Ch 1: Images of Man in a Changing Society — definitions, influence mechanisms
- Ch 2: Historical Images — 19 formative images from hunter to perennial philosophy
- Ch 3: Economic Man — industrial metaphors, critique of materialistic paradigm
- Ch 4: Science's Influence — paradigm shifts, frontier research, emerging models
- Ch 5: Characteristics of an Adequate Image — 6 criteria for a viable future image
- Ch 6: Feasibility — conceptual and operational pathways for transformation
- Ch 7: Contrasting Futures — technological extrapolationist vs. evolutionary transformationalist
- Ch 8: Guidelines and Strategies — premises, approaches, non-catastrophic transition

Documentation

- Visual Elements: 17 figures (models, relationships, metaphors) and 10 tables (comparisons, historical frameworks)
- Research Output: Detailed analysis of image-society dynamics, institutional implications, transformation pathways

Deliverables

- Conceptual Framework: Integrative evolutionary model incorporating scientific, perennial, and systems perspectives
- Critical Analysis: Industrial paradigm limitations, science-society interactions, transformation challenges
- Action Guidelines: Foundation, government, corporate, and individual strategies (Appendix E)

Ch. 1 Overview: Images of Man in a Changing Society

Chapter 1 introduces the foundational concept that all societies operate based on implicit "images of man" that profoundly shape policy decisions, social structures, and cultural norms. These images function as organizing principles that guide how we address societal challenges.

Thesis: Images Embed in Policy

All public and private policy decisions necessarily embody some view (or compromise of views) about the nature of humanity, society, and the universe. Educational systems, approaches to poverty, treatment of welfare, prioritization of human needs—all are affected by the dominant image of humankind in a society. *(ref: pp. 1-3)*

Symbolic Lenses: Eliade and Lifton

"Symbolic thinking is not the exclusive privilege of the child, of the poet or of the unbalanced mind; it is consubstantial with human existence..." (Mircea Eliade). "Man is a symbol-forming organism. He has constant need of a meaningful inner formulation of self and world..." (Robert Jay Lifton). These lenses help us understand images as fundamental rather than superficial. *(ref: p. 1)*

Chapter Focus

This chapter provides a working definition of "image of man," explores mechanisms through which images influence perception and behavior, and establishes their relevance to contemporary society—particularly as we face interlinked challenges that require new conceptual frameworks. *(ref: pp. 1-16)*

Working Definition: "Image of Man"

Core Definition

- A set of assumptions about human origin, nature, abilities, relationships with others, and place in the universe
- A coherent image may be held by individuals, groups, political systems, religions, or entire civilizations

Key Attributes

- Includes fundamental assumptions:
 - Whether humans are basically good or evil
 - Whether the will is free or determined by external forces
 - Whether we are inherently cooperative or competitive
 - Whether humans are essentially equal
 - What it means to be "human" in a given society
- Encompasses both descriptive (what humans "are") and normative (what humans "ought to be") dimensions

Nature of Images

- Functions as a Gestalt perception of humankind in relation to self, others, society, and cosmos
- May contain multiple levels and apparent contradictions while still experienced as an organic whole
- Necessarily selective in which attributes are considered "real" or worthy of development
- Held with varying degrees of awareness—often operates at the boundary between conscious and unconscious mind

Reference: pp. 2-3

How Images Shape Social Policy

Education

- Ideal adult type drives pedagogical approach
Competitive image → *competitive games, individual achievement rewards*
Cooperative image → *team projects, collaborative learning models*

Economics

- Metrics & incentives reflect human assumptions
Rational utility maximizer → *GDP focus, profit optimization*
Holistic being → *well-being indices, social/environmental accounting*

Health/Architecture/Work

- Physical/spiritual emphasis changes practice
Mechanistic view → *standardized treatments, cubicle workspaces*
Holistic view → *integrated wellness, biophilic design, creativity focus*

Ethics

- Relationship to nature defines stewardship
Dominion over nature → *resource exploitation, short-term extraction*
Part of nature → *conservation ethic, regenerative practices*

Reference: "Changing Images of Man", pp. 1-3

Image Impacts: Illustrative Contrasts

- **Separate from nature** (superior, apart) → VS ← **Part of nature** (integrated, ecological)
Exploitation ethic vs. Ecological ethic
- **Human as animated machine** (physical parts) → VS ← **Human as purely spiritual** (transcendent)
Non-physical aspects ignored vs. Material needs neglected
- **Fixed human nature** (complete, static) → VS ← **Evolving human nature** (developing, dynamic)
Adapt institutions to fixed human traits vs. Cultivate human potential through development
- These contrasting images fundamentally shape policy approaches, institutional designs, and societal values—determining our relationship with environment, technology, medicine, education, and personal development
- The adequacy of our dominant images determines our capacity to address complex challenges that span physical, social, psychological, and spiritual dimensions

Figure 1: Time/Phase Relationship Between Images and Cultural Development

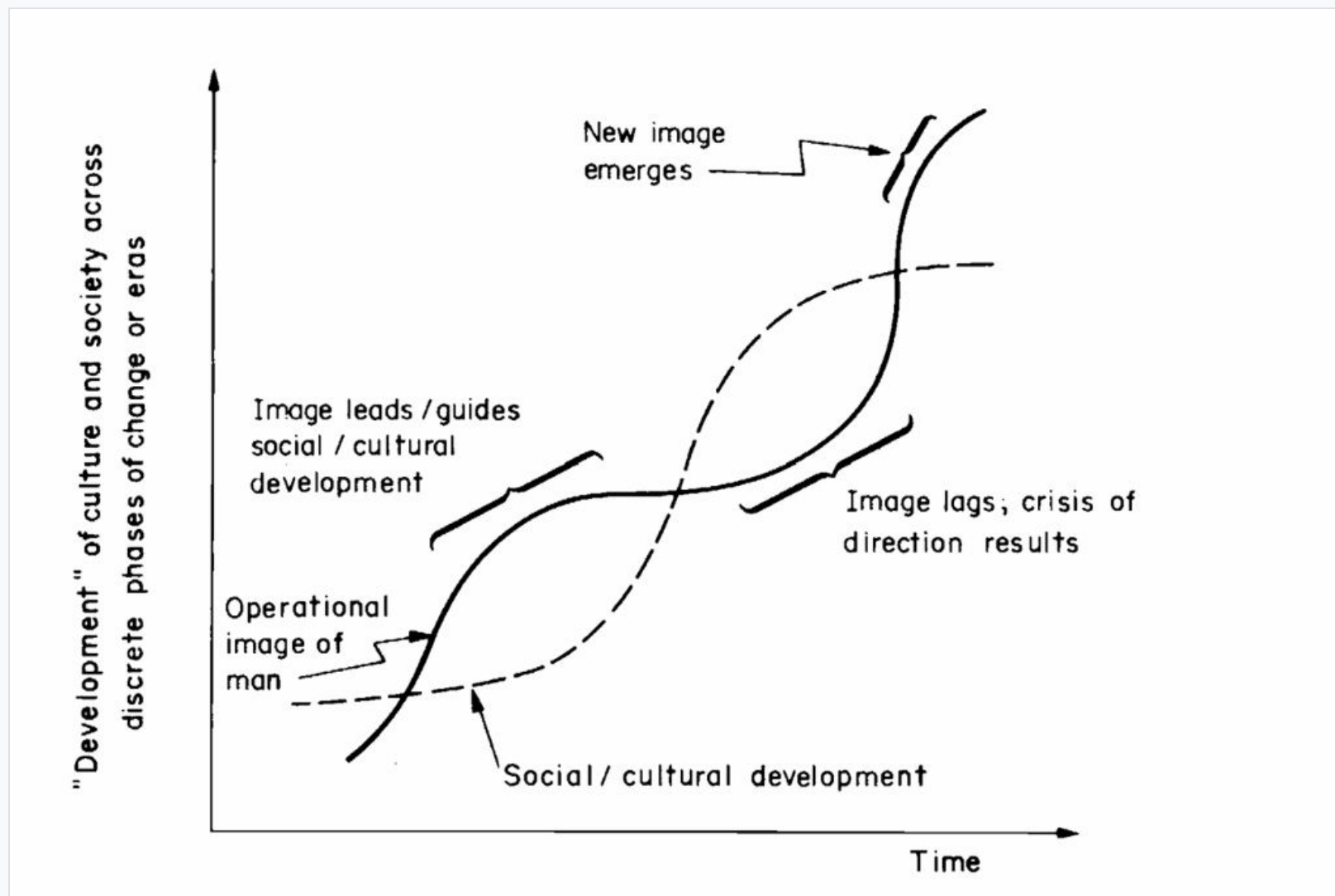


Figure 1 illustrates how images initially lead societal development, then lag behind as material conditions evolve. The increasing gap creates mismatches that can precipitate crises, requiring new integrative images.

The Hypothesis

The study proposes that transformative images of humankind initially lead and catalyze social development, providing vision and direction. However, as material conditions and institutions evolve, the once-revolutionary images become embedded and eventually lag behind emerging realities.

Implications

This explains why once-useful images (such as Economic Man) that enabled industrial growth may now obstruct adaptation to post-industrial challenges. The increasing mismatch between dominant images and changing conditions creates strain in social systems, potentially leading to transformation or crisis.

Reference: List of Illustrations #1, p. 14

Why Images Matter Now

As we face unprecedented global challenges, the images of humankind that guide our policies and institutions have become critically important. The study identifies three interconnected dimensions that make reimagining humanity urgent:

1

Interlinked Macro-Problems

Resource depletion, pollution, population growth, and governance challenges have created a "crisis of crises" that cannot be solved through fragmented approaches or existing paradigms.

These challenges require coordinated responses based on new understandings of humanity's relationship with the planet.

2

Industrial Image Mismatch

The dominant "Economic Man" image that enabled industrial growth now obstructs adaptation to post-industrial realities. This growing gap between image and reality creates systemic strain, institutional delegitimation, and collective disorientation.

3

Creative Opportunity

We have the unprecedented opportunity to consciously re-create integrative images that support human flourishing within ecological boundaries.

New scientific paradigms, ancient wisdom traditions, and systems thinking offer resources for this integrative reimagining.

Key Insight

The transformation of our foundational images of humankind may be the highest leverage point for addressing the complex challenges we face in the transition to a post-industrial, ecologically sustainable future.

Reference: Intro Pergamon, pp. xvii-xx

Ch. 2 Overview: Historical Images & Table 3

Chapter 2 examines formative images of humankind that have shaped Western cultural and intellectual history, revealing how our predecessors' conceptions continue to influence modern thought patterns, social structures, and policy approaches.

Survey Aim

To provide a selective historical survey of the images of humankind that have particular relevance to our current society and possible future images, tracing the development of conceptions that have fundamentally shaped Western civilization. *(ref: pp. 17–35)*

Table 3: Comparative Framework

Table 3 ("Dominant Images of Humankind Throughout History") serves as an organizing framework, systematically comparing each historical image across periods, identifying key characteristics, philosophical sources, and societal impacts. This table provides a comprehensive overview of the 19 major images discussed in the chapter. *(ref: p. 17; List of Tables #3)*

Methodological Approach

Each historical image is analyzed through multiple lenses: (1) temporal/cultural context; (2) defining characteristics and assumptions about human nature; (3) key thinkers, movements, and texts; and (4) the image's influence on institutions, values, and subsequent social development. The chapter traces these images from prehistoric hunter-gatherer societies through contemporary systems theory. *(ref: Ch.2)*

Structure

The historical survey progresses from early primal images (hunter, planter), through Near Eastern, Greek, Roman, and Christian conceptions, into the modern era (scientific, industrial, behavioral), culminating with emerging integrative perspectives (holistic, systems-based, spiritual). The analysis culminates in examining "The American Creed" and its underlying tensions. *(ref: pp. 17–39)*

Early Images: Hunter and Planter/Agrarian

Hunter Image

Middle Paleolithic (c. 250,000–40,000 B.C.)

- Male-dominated society and leadership structure
- Spiritual affinity between humans and animals
Totemism: identifying with animal spirits and powers
- Proto-martial metaphors for social organization
Hunting strategies as foundation for warfare tactics
- Social impact: Military/hierarchical structures in later societies

Planter/Agrarian Image

Neolithic (after 9000 B.C.)

- Matrifocal social organization
Women as givers of life, central to community identity
- Goddess worship and fertility symbolism
Earth as mother, agricultural cycles as sacred
- Partnership relationship with nature
Cultivation rather than domination of environment
- Social impact: Balance to male emphasis in later Western culture

Reference: "Changing Images of Man", Ch. 2, Historical Images section

These early images continue to influence contemporary attitudes toward gender, nature, and social organization

Sumerian and Semitic: Submission & Chosen

Sumerian Image

- Civilization through submission
Submission to rulers and seasonal cycles
Bureaucratic kingship; hierarchical order
- Social organization
Early urban civilization; temple-based administration
Acceptance of natural and social hierarchies
- Legacy
Foundation for civic order and bureaucracy
Environmental regulation according to natural cycles

Semitic Image

- Creaturehood and dominion
Humans as creatures formed of clay to serve God
Given dominion over nature; concept of stewardship
- Covenant and chosen people
Special relationship with divine through covenant
Brotherhood themes; ethical obligations
- Influence
Foundation for Judaism, Christianity, and Islam
Justified both social hierarchies and ethical responsibilities

Reference: "Changing Images of Man", Ch. 2, pp. 22-23

Zoroastrian: Moral Chooser

Key Concepts

- **Free Will in Cosmic Struggle** — Human beings choose between cosmic forces of good (Ahura Mazda) and evil (Angra Mainyu)
- **Ethical Individualism** — Personal responsibility for moral choices; individual accountability for one's actions
- **Linear History** — First major tradition to introduce time as linear rather than cyclical, with creation, progression, and ultimate judgment

Historical Significance

- **Messianic Time** — Introduced concept of a future savior (Saoshyant) who would renew the world; influenced later apocalyptic traditions
- **Salvation Narrative** — Final triumph of good over evil; resurrection of the dead; judgment of souls based on moral choices
- **Western Foundations** — Profoundly influenced Judaism during Babylonian exile, later affecting Christianity and Islam

Dating to approximately 1200 BCE; founded by prophet Zarathustra (Zoroaster)

Eastern Images: Yogi/Sage (India/China)

India: The Human as Yogi

- **Liberation (Moksha)**
Freedom from the cycle of birth and death; ultimate goal of human existence
- **Yoga & Meditation**
Disciplines for controlling body and mind; path to spiritual awakening
- **Self-Knowledge (Atma-vidya)**
Understanding one's true nature beyond ego identification
- **Karma & Reincarnation**
Actions determine future births; ethical foundation based on cosmic justice

China: The Human as Sage

- **Superior Person (Chün-tzu)**
Cultivation of virtue, wisdom, and ritual propriety; exemplar for society
- **Taoist Harmony**
Living in accordance with nature's rhythms; wu-wei (non-action)
- **Confucian Social Order**
Structured relationships; emphasis on duty, family, and hierarchy
- **Social Responsibility**
Individual growth serves collective harmony; personal cultivation benefits society

Reference: "Changing Images of Man," Chapter 2

Near Eastern: Separate from God and Nature

Core Concepts

- Anthropocentrism: Humans as distinct and special among creation, central to cosmic purpose
- Strong sacred/profane dichotomy: Clear separation between divine and earthly domains
- Divine mandate of dominion: "Be fruitful and multiply, fill the earth and subdue it" (Genesis 1:28)
- Obedience as primary virtue: Relationship with divine characterized by law and covenant

Societal Implications

- Conquest legitimization: Creation as divinely ordained human territory
- Stewardship paradox: Both responsibility for and authority over the natural world
- Nature instrumentalized: Value determined by utility to humans rather than intrinsic worth
- Hierarchical cosmic order: God → humans → animals → plants → inanimate objects

Historical Influence

- Scientific revolution: Facilitated objective study of nature as separate from human observer
- Technological development: Encouraged mastery through understanding and manipulation
- Environmental attitudes: Continues to shape Western approach to ecological challenges

Source: pp. 22-23

Gnostic: The Knower

Core Concept

- Salvation through *gnosis* (direct knowledge) rather than faith or dogma
- "The Kingdom of Heaven is within you" — emphasis on inner experience over external ritual
- Direct experiential knowledge of divine reality attainable through contemplative practices

Historical Context

- Emerged in Near East during early centuries AD; found in texts like Gospel of Thomas
- Presented an alternative interpretation of Jesus's teachings emphasizing esoteric wisdom
- Generally suppressed by orthodox authorities as heretical

Legacy and Influence

- Sustained mystical strands within mainstream religions:
 - Christian mysticism (Meister Eckhart, Teresa of Ávila)
 - Islamic mysticism (Sufism, especially Ibn Arabi)
- Offered alternative to hierarchical religious authority — direct access to divine
- Influenced later Western esoteric traditions and modern spiritual movements

Reference: Chapter 2, p. 23-24

Greek: The Heroic Individual

Core Concept

- **Arete** (excellence) — The pursuit of virtue and excellence in all domains of life
- **Rationality** — Rise of logos (reasoned discourse) over mythos; foundation for philosophical inquiry
- **Civic virtue** — Ethics based on right action in the polis (city-state); harmony with nature and self
- **Social structure** — Citizen vs. slave dichotomy; participation rights defined by status

Key Thinkers

- **Socrates** — Questioning method; virtue as knowledge; self-examination
- **Plato** — Forms; philosopher-king ideal; tripartite soul; Republic
- **Aristotle** — Golden mean; empiricism; eudaimonia (flourishing); Politics

Historical Impact

- Foundation for Western individualism, philosophy, and scientific thought
- Established rational discourse as means to truth and ethical understanding
- Created tension between community needs and individual excellence
- Legacy in Renaissance humanism and Enlightenment values

Roman: Universal Citizen & Law

Core Concepts

- Extension of citizenship beyond city-state boundaries — Roman innovation transforming political identity
- Legal universalism — systematic codification of law applicable across diverse territories
- Imperial administration — bureaucratic structures enabling governance of vast territory

Historical Significance

- Expanded notion of belonging and rights beyond ethnic or tribal identity
- Created framework for civic order transcending kinship bonds
- Established precedent for rule of law across multicultural territories

Legacy

- Foundation for European legal systems and jurisprudence
- Influenced modern concepts of citizenship and civic responsibility
- Template for administrative governance of large-scale political entities

Reference: Chapter 2, "Some Formative Images of Man-in-the-Universe"

Christian: Brotherhood & Salvation

Core Concepts

- Spiritual brotherhood: "All are one in Christ" — transcendence of tribal, class, and national divisions through spiritual kinship
- Obedience to divine authority: Personal relationship with God, mediated through church structures
- Salvation through grace vs. works: Tension between faith-based and action-based paths
- Transcendence of worldly roles: Status in God's eyes not determined by earthly position

Social Forms

- Community: Ecclesia (assembly) as alternative family structure; mutual support networks
- Charity: Institutionalization of care for vulnerable populations (widows, orphans, poor)
- Moral norms: Codification of ethics based on love, forgiveness, and self-sacrifice
- Societal impact: Continuous negotiation between spiritual ideals and temporal powers

Timeframe: Early Christianity (c. 100 CE) through Medieval Age (c. 1500)

Key figures: Jesus, Paul, Augustine, Church Fathers (ref: p. 23)

Renaissance: Man "Over Things"

Core Concepts

- Empiricism: Direct observation and experiment as primary source of knowledge; rejection of pure authority
- Human dignity: Celebration of human potential and capability; man as noble creator and explorer
- Mastery over nature: Natural world as subject to human understanding, manipulation, and control
- Exploration: Geographic discovery parallels intellectual discovery; expanding horizons

Key Catalysts

- Copernicus (1473–1543): Heliocentric model challenging Earth-centered cosmology
- Galileo (1564–1642): Experimental method, telescope observations, mathematical physics
- Bacon (1561–1626): Scientific method, empirical approach, "knowledge is power"
- Descartes (1596–1650): Mathematical rationalism, mind-body dualism, methodic doubt

Historical Impact

- Seeds of modern scientific revolution and Enlightenment thinking
- Shift from theological to natural explanations of phenomena
- Foundation for technological development and industrial progress
- Source of enduring tension between humanistic and mechanistic worldviews

Reference: Chapter 2, pp. 26-27

Scientific Revolution: Mechanistic Man

Core Metaphor & Thinkers

- World as **matter-in-motion**: Universe operates like a grand machine, following immutable physical laws
- Driven by **Newton** (mathematical laws of motion, universal gravitation) and **Descartes** (mind-body dualism, mechanical philosophy)
- Human body conceptualized as complex clockwork mechanism; animals as sophisticated automata
- Sharp distinction between thinking mind (res cogitans) and physical world (res extensa)

Epistemological Approach

- **Reductionism**: Understanding complex systems by reducing them to constituent parts
- **Clockwork universe**: Deterministic, predictable operations governed by mathematical laws
- **Utility**: Knowledge valued for practical application and material advancement
- Measurement, quantification, and mathematical modeling as primary tools

Cultural & Industrial Impact

- Foundation for industrial techniques: standardization, interchangeable parts, precision manufacturing
- Control metaphors permeate social organization: efficiency, productivity, predictability
- Legacy: Persists in contemporary engineering, medicine, and management despite quantum/complexity challenges

Reference: Ch. 2, pp. 22-23, 27-28

Industrial: Economic Man

Core Concept

- The dominant industrial era image: rational, calculative "human-as-economic-unit" centered on materialistic self-interest
- Driven by market incentives, utility maximization, and enlightened self-interest as the highest virtue

Key Characteristics

- Rationalistic: able to calculate optimal choices based on self-interest and utility
- Mechanistic: a "factor of production" within industrial systems
- Individualistic: responsible primarily for self; competition over collaboration
- Materialistic: economic forces as primary reward and control mechanisms

Intellectual Foundations

- Political economy: Adam Smith's "invisible hand" of the market; John Stuart Mill's utilitarianism
- Markets as the most efficient form of social organization and decision-making
- Protestant ethic: industriousness as moral virtue; material success as sign of divine favor

Institutional Embodiments

- Capitalism: private property, wage labor, profit incentive, corporate structure
- Industrial organization: factory system, division of labor, management hierarchy
- Nation-state alignment with economic growth as primary policy goal

Darwin/Freud: Human as Beast

Core Concepts

- Evolutionary struggle: Survival of the fittest; natural selection shapes humans through biological evolution rather than divine creation
- Instinct-driven behavior: Underlying animal nature constrains and drives human action through phylogenetic inheritance
- Unconscious forces: Primal drives (sex, aggression) exist beneath rational thought; civilization merely contains them

Key Thinkers

- Charles Darwin: Established evolutionary continuity between humans and animals; natural selection process
- Sigmund Freud: Posited that civilization is a thin veneer over primitive drives (id); introduced unconscious mind
- Konrad Lorenz: Ethology demonstrating innate aggression patterns; territorial imperatives

Philosophical Ambivalence

- Competitive interpretation: "Nature red in tooth and claw"; struggle as primary mode of existence
- Cooperative counterbalance: Peter Kropotkin documented mutual aid as evolutionary factor; symbiosis and cooperation equally natural
- Legacy: Tension between these views shapes social policy assumptions about human nature (e.g., capitalism vs. socialism)

Reference: Chapter 2 - Historical Images: The Human as Beast (Darwinian, Freudian, ethological views)

Behaviorism: Human as Mechanism (Modern)

Core Principles

- Stimulus-response paradigm: Human behavior explained as mechanical responses to environmental stimuli
- Rejection of introspection and consciousness as valid subjects of scientific study
- Focus on observable, measurable behaviors rather than internal mental states

Key Figures

- John B. Watson: Founded behaviorism, argued any child could be trained for any profession
- B.F. Skinner: Developed operant conditioning, reinforcement schedules, and behavior modification techniques
 - Advocated "technology of behavior" for social engineering
 - Envisioned utopian communities (Walden Two) based on behavioral principles

Applications and Implications

- Education: Programmed instruction, teaching machines, behavior modification in classrooms
- Behavior engineering: Techniques for institutional settings, therapy, and social control
- Reduced concept of autonomy: Free will and agency minimized or eliminated in favor of environmental determinism
- Legacy: Modern behavioral economics, cognitive-behavioral therapy, evidence-based interventions

Reference: Chapter 2, p. 30

Humanism: Human as Person

Core Concept

- Rejects reductionist views of humans as merely machines or animals; emphasizes uniqueness of human experience and consciousness
- Centers on intrinsic worth of each person—dignity and value not derived from utility or function
- Emphasizes self-actualization—the drive to fulfill one's potential as central human motivation

Key Figures

- Carl Rogers: Person-centered therapy, unconditional positive regard, organismic valuing process
- Abraham Maslow: Hierarchy of needs, peak experiences, self-actualization theory
- Association for Humanistic Psychology: "Third force" beyond behaviorism and psychoanalysis

Societal Impact

- Theoretical foundation for modern human rights discourses and movements
- Inspired human potential movement (1960s-1970s)—emphasis on growth and transformation
- Influenced education (student-centered learning), healthcare (patient dignity), and organizational theory (fulfillment at work)
- Provided counterbalance to mechanistic views dominant in industrial society

Reference: p. 30, Changing Images of Man

Systems Theory: Evolving Holon

Core Concept

- Human as "holon" — simultaneously a whole entity and part of larger systems
 - Term coined by Arthur Koestler: "whole-part" in nested hierarchies
 - Person as subsystem, system, and supersystem simultaneously
- Open systems theory (Ludwig von Bertalanffy)
 - Systems exchange energy, matter, and information with environment
 - Contrast to closed mechanistic models of earlier paradigms

Key Principles

- Feedback loops and self-regulation
 - Homeostasis, adaptation, and learning through feedback
 - Emergence of higher-order properties not predictable from parts
- Hierarchical organization with increasing complexity
 - Each level transcends and includes lower levels
 - Evolution toward greater integration and differentiation

Applications & Significance

- Interdisciplinary integration across fields (Ervin Laszlo)
 - Common principles across physics, biology, psychology, sociology
 - Methodologies for addressing complex multi-level problems
- Foundation for ecological paradigms
 - Human as embedded within, not separate from, natural systems
 - Provides conceptual framework for sustainable relationship with biosphere

Reference: Chapter 2, p. 32-33

Perennial Philosophy: Human as Spirit

Core Concept

- Humans as manifestations of universal consciousness or spirit, not merely material beings
- Direct mystical union with the divine/absolute possible through contemplative practice
- "The atma, the Self, is never born and never dies... smaller than the smallest atom, greater than the greatest spaces" (Upanishads)

Key Traditions & Thinkers

- Ancient wisdom: Vedanta/Upanishads, contemplative Buddhism, Sufism, Christian mysticism
- Modern synthesis: Aldous Huxley's "The Perennial Philosophy" (1945), Sri Aurobindo, Thomas Merton
- Trans-egoic awareness: Transcendence of self-identity, non-dualistic experience of reality

Contemporary Relevance

- Basis for global ethical frameworks: interconnectedness, non-violence, universal compassion
- Science-religion dialogues: consciousness studies, quantum physics interpretations
- Cross-cultural common ground for addressing planetary-scale human challenges

Ref: Chapter 2, pp. 33-35

Table 3: Dominant Images of Humankind Throughout History

Historical Period	Dominant Image	Key Characteristics	Societal Influence
Middle Paleolithic	The Hunter	Male-dominated, spiritual affinity with animals	Martial metaphors, competitive ethic
Neolithic	Planter/Agrarian	Goddess worship, fertility, cyclical time	Partnership with nature, matrifocal elements
Classical to Renaissance	Multiple evolving images	From religious submission to rational mastery	Civilization, hierarchy, individualism
Industrial Era	Economic Man	Rational self-interest, mechanism, competition	Markets, nation-states, materialism
Contemporary	Competing paradigms	From mechanism to systems/holism	Institutional strain, transformation potential
<i>Simplified representation of Table 3 (p. 17) - The complete table categorizes 19 distinct historical images</i>			

Table Overview

Table 3 provides a comprehensive historical survey tracking dominant images of humankind across cultural epochs. Each entry captures the period, defining image characteristics, key thinkers or movements, and societal influence. The table reveals how evolving images have shaped institutions, values, and technological trajectories from prehistoric to contemporary times.

Discussion Orientation

Use this historical survey to identify continuities (e.g., persistent themes like mind-body dualism) and ruptures (e.g., the Copernican revolution) across different eras. Consider how earlier images persist as layers within later ones, creating tensions that shape modern identity. The table illuminates how seemingly abstract images directly influence concrete social structures and technological priorities.

Reference: "Changing Images of Man", p. 17, Table 3

Table 4 & The American Creed

Attribute	Contemporary U.S. Image	Associated Value
Human Nature	Potentially good, malleable	Optimism, individualism
Relationship to Nature	Mastery, exploitation	Progress, materialism
Social Relations	Competitive, achievement-oriented	Meritocracy, self-reliance
Political Structure	Democracy, pluralism	Liberty, equality
Knowledge System	Scientific rationality, empiricism	Practicality, innovation
Summarized from Table 4: Attributes of the dominant image in contemporary United States (p. 39)		

The American Creed

The American Creed represents the core ideological synthesis in U.S. culture, encompassing four key values: individualism (personal autonomy, self-reliance), equality (equal opportunity, if not outcome), liberty (freedom from constraint), and democracy (participation in governance, majoritarianism). These values emerged from the nation’s historical development, drawing from both Enlightenment philosophy and frontier experiences.

Underlying Tensions and Value Conflicts

The dominant image contains inherent contradictions: individual achievement vs. communal welfare; equal opportunity vs. structural inequality; freedom vs. regulation; mastery over nature vs. ecological constraints; democratic ideals vs. technocratic complexity. These tensions create strain within institutions—where individualist values may conflict with ecological needs, or where democratic processes struggle with technical complexity in governance.

Reference: "Changing Images of Man", p. 39 (Table 4), Chapter 2 concluding sections

Ch. 3 Overview: Economic Man's Rise and Crisis

Chapter 3 examines the development and crisis of the "Economic Man" image that has dominated the industrial era but now faces fundamental challenges in a post-industrial world of growing abundance yet planetary constraints.

The Image Defined

Economic Man is characterized as rationalistic (calculating self-interest), mechanistic (a factor of production), individualistic (responsible primarily for self), and materialistic (motivated by economic incentives). This image underlies both capitalist and socialist industrial systems. *(ref: p. 46)*

Historical Context

Emerged from Renaissance individualism, Protestant ethic, and Enlightenment rationality; gained dominance during the industrial revolution as it effectively facilitated economic growth, technological development, and material prosperity through markets and institutions. *(ref: pp. 45-49)*

Central Question

Can an image developed for conditions of scarcity adequately serve a society facing relative abundance within absolute planetary limits? The chapter explores the growing mismatch between this dominant image and our emerging societal realities. *(ref: pp. 50-56)*

Chapter Structure

The chapter examines: 1) sources and foundations of the economic image; 2) its contemporary setting and paradoxes; 3) the mismatch between premises and realities; 4) potential resolutions and future prospects. *(ref: Ch.3 organization)*

Foundations: Rationalism, Individualism, Materialism

- **Renaissance/Reformation origins:** Dignity of the individual; reason as primary faculty; rejection of traditional authority structures in favor of individual agency and judgment
 - "A new belief in the power and dignity of the individual..." (ref: p. 47)
- **Natural law philosophy:** Self-interest harmonies; invisible hand; mathematical/mechanistic universe governed by discoverable laws
- **Secular progress ethos:** Optimism for earthly improvement through human effort; rejection of fate and divine providence as primary drivers
 - "People came to see their future in an optimistic perspective." (ref: p. 47)
- **Materialism normalized:** Pursuit of wealth transformed from necessity to virtue; accumulation as indicator of divine favor (especially in Protestant contexts)
- **Calvinist work ethic:** Hard work, discipline, and frugality as moral virtues; success in material realm interpreted as sign of election
 - Industriousness as calling; delayed gratification as virtue

These foundations systematically transformed earlier human images into the rational, calculating "Economic Man" that would become central to industrial society.

Protestant Ethic & Industrial Form

Religious Foundations

- Industriousness as sacred calling — work as divine vocation rather than burden
- Deferred gratification — present sacrifice for future reward (secularized as capital investment)
- Thrift as moral virtue — frugality elevated to spiritual discipline
- Individual accountability before God — personal responsibility and self-regulation

Institutional Embodiment

- Markets — formalization of exchange based on contractual relationships and calculable rules
- Factories — standardization of time, discipline, and hierarchical management
- Measurement — metrics for productivity, efficiency, and profit as proxies for virtue
- Bureaucracy — rationalized organization based on roles rather than personal relationships

Cultural Legacy

- The "spirit of capitalism" — religious motivation secularized into economic drive
- Protestant work ethic underpins modern corporate culture, time management, and productivity focus

Reference: Ch. 3, pp. 47-48

Abundance Paradox in a Post-Scarcity Context

- **Material prosperity rises** while meaning declines — unprecedented material abundance coincides with "disturbing spiritual, personal, and social poverty" (Etzioni, 1972)
- **Easterlin paradox** — "Each person acts on the assumption that more money will bring more happiness...but when everyone acts on this assumption and incomes generally increase, no one, on the average, feels better off" (Easterlin, 1973)
- **Psychological scarcity** replaces material scarcity — advertising and status competition manufacture wants that can never be satisfied
- **Collision with ecological limits** — the pursuit of ever-increasing consumption confronts finite planetary boundaries
- **Keynes' insight** — "With the age-old goal of universal prosperity within sight, we must question whether the methods...will serve to take us beyond it" (ref: p. 51)

The abundance paradox lies at the heart of the mismatch between industrial-era images and post-industrial realities

Key Statistics: Poverty and Income

Poverty Rate Decline

- U.S. poverty rate fell dramatically from **~60%** in 1929 to **~12%** by 1969
 - Unprecedented reduction in material deprivation during industrial expansion
 - Shifted the experience of poverty from majority condition to minority status

Income Growth

- Median family income rose from **\$2,100** (1939) to **\$9,433** (1969)
 - Projected to reach **\$22,000** by 2000 — a more than tenfold increase in 60 years

Scarcity to Abundance Shift

- Fundamental transformation in material conditions underlying the "economic man" image
 - Economic premises based on scarcity become increasingly obsolete
 - Creates paradox: unprecedented wealth alongside spiritual and social poverty
 - Challenges core assumptions of industrial-era economic models

Figure 8: Economic Man and Society Interaction

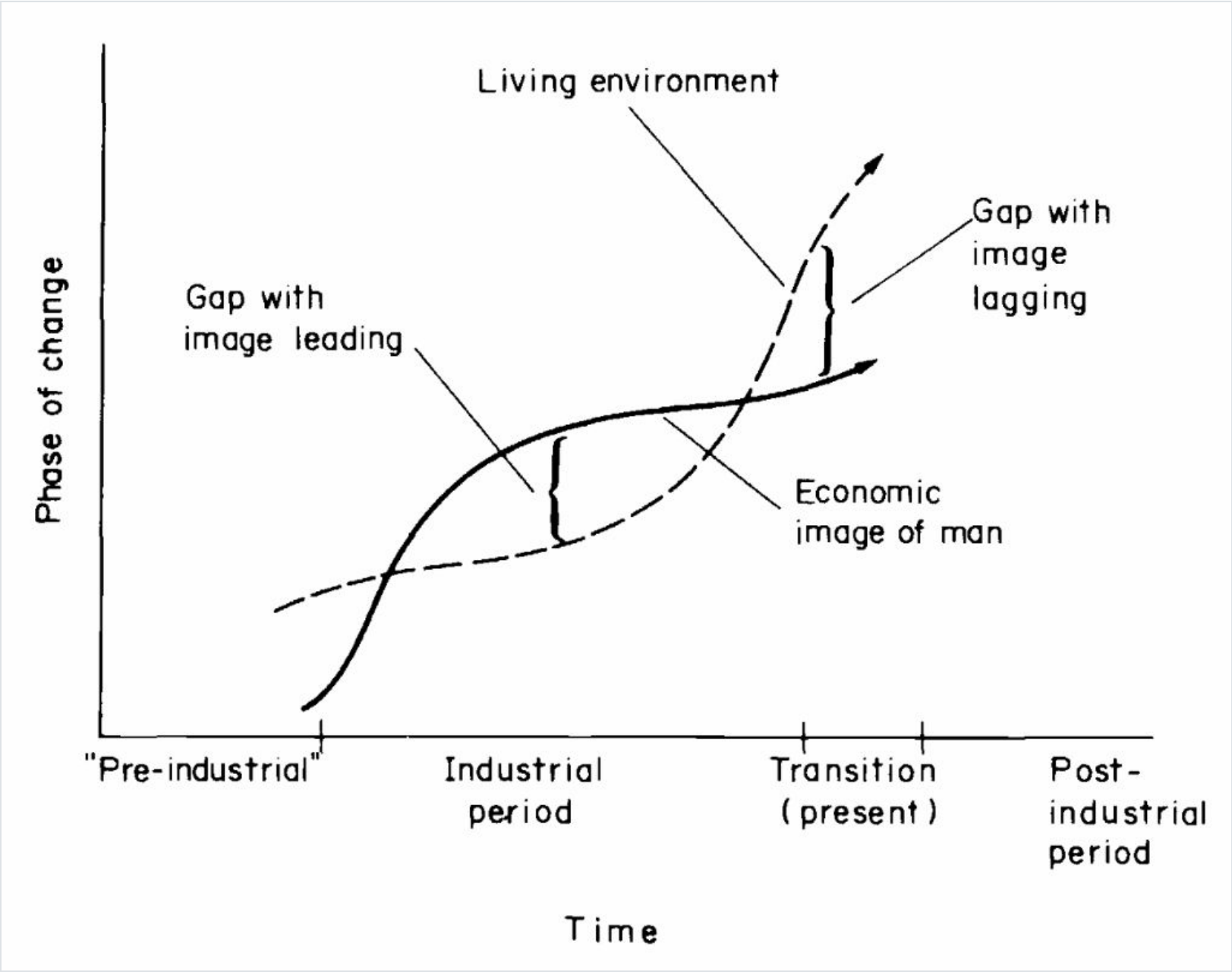


Figure 8 demonstrates how the economic man image initially led and shaped industrial growth but now lags behind post-industrial realities, creating a disruptive mismatch that challenges policy adaptation.

The Lead-Lag Dynamic

During early industrialization, the image of Economic Man (rational, self-interested, materialistic) provided a guiding framework that enabled rapid growth and development. However, as material conditions evolved toward post-scarcity and ecological awareness, this once-revolutionary image became embedded in institutions and began to lag behind changing societal needs.

Policy Risk of Image Inertia

The growing gap between economic assumptions and societal realities creates policy dysfunction. Decision-makers continue applying obsolete frameworks to new problems, leading to inadequate responses to ecological limits, meaning deficits, and social fragmentation. This image inertia locks institutions into maladaptive strategies and resistance to necessary transformation.

Reference: Figure 8, p. 49

Problems I: Obsolescent Premises & GDP Critique

Obsolescent Value Premises

- **Growth Equals Progress:** Economic growth as primary societal goal
- **Self-Interest → Common Good:** Individual pursuit automatically benefits society
- **Separateness:** Limited responsibility for distant/future effects
- **Mastery Over Nature:** Environment as resource to be conquered
- **Technological Imperative:** What can be done, should be done
- **Rationality & Reductionism:** Analytical over holistic thinking
- **Identity via Possessions:** Status defined by material ownership
- **Freedom = Affluence:** Higher income equated with real choice
- **Nation-State Competition:** International relations as zero-sum game

GDP as Misdirected Metric

- Measures quantity of economic throughput, not quality of life
- Counts negative activities as positive (pollution cleanup, illness)
- Ignores critical factors:
 - *Environmental externalities*
 - *Resource depletion*
 - *Wealth distribution*
 - *Social cohesion*
 - *Unpaid work (caregiving, volunteering)*
- Maximizes what is easiest to measure
 - "Business ideology tends to bring out, standardize, and reward the most unsocial impulses in man." —Tumin*
- Reinforces self-fulfilling hypothesis: humans motivated only by immediate self-interest

Reference: "Changing Images of Man", pp. 53-56

Problems II: Ecology, Spiritual Poverty, Alienation

- **Ecological consequences:** The industrial system has become "increasingly powerful role as the creator of its own environmental context" yet lacks symbiotic responsibility
 - Mastery-over-nature premise now threatens survival through resource depletion and pollution
 - Technological development outpaces ecological understanding and adjustment (ref: p. 55)
- **Non-rational suppression:** Exclusive focus on rationality and quantification leads to dehumanization
 - The "suppression of the non-rational human potentials" creates meaning deficits
 - Scientific/economic framework inadequate for qualitative experience (ref: p. 55)
- **Alienation:** "The industrial period has thus been very costly as it has left us alienated, to varying degrees, from these sources of meaning"
 - From cosmos: "Mysteries displaced by cold rationality of science"
 - From community: "Incomprehensible urban existence"
 - From self: "Social pressures created 'other-directed' mentality" (ref: p. 63)
- **Loss of utopian imagination:** "Our visions of the future have shifted from images of hope to vistas of despair"
 - "The words 'utopian' and 'myth' currently connote impracticality, fantasy, and irrelevance"
 - "Utopias have become warnings, not beacons" (Keniston, 1965, ref: p. 62)

Prospects: Two Trajectories

Society faces two divergent pathways for navigating through post-industrial challenges. These contrasting futures represent fundamentally different images of humankind and corresponding institutional arrangements:

1

Technological Extrapolation

Continuation of industrial-era assumptions and methods through increased centralization, expert management, and technological control. Characterized by specialized bureaucratic planning, efficiency prioritization, surveillance technologies, and management of human behavior for system stability.

2

Evolutionary Transformation

Fundamental shift toward human-centered, ecological systems that prioritize meaningful participation and holistic development. Features decentralized institutions, participatory decision-making, steady-state economics, and balance between rational-intuitive capacities.

3

Decision Locus

The critical choice point lies in image revision preceding institutional redesign—how we fundamentally conceive of human nature determines what systems we create. Without conscious revision of our guiding images, institutional adaptations will remain reactive and potentially dehumanizing.

Key Insight

"We can either involve ourselves in the recreative self- and societal-discovery of an image of humankind appropriate for our future, with attendant societal and personal consequences, or we can choose not to make any choice, and, instead, adapt to whatever fate, and the choices of others, bring along."

Reference: Chapter 7, pp. 62-64

Ch. 4 Overview: Science's Influence on the "Image of Man"

This chapter examines how scientific paradigms have shaped our conception of humanity, and conversely, how cultural images influence the development of science itself. The analysis focuses on limitations of classical approaches, emerging anomalies, and characteristics of a potentially new scientific paradigm.

Classical Science: Characteristics and Limitations

The chapter begins by examining mechanistic and deterministic assumptions of classical science that have proven inadequate, yielding to probabilistic laws of causality and models quite foreign to ordinary experience. *(ref: Ch.4, p. 67)*

Scientific Frontier Areas and Anomalies

A cursory examination of frontier areas where anomalies are showing up or where data do not fit comfortably into old paradigms—including physics, consciousness research, parapsychology, and systems theory. These challenges may ultimately result in a paradigm shift when the strain of patching up the old or suppressing offending data becomes too great. *(ref: Ch.4, p. 67)*

Characteristics of a Possible New Paradigm

The chapter explores sources and characteristics of an emerging scientific paradigm that is more inclusive, eclectic in methodology, incorporates subjective experience, and embraces principles of complementarity and hierarchy of consciousness. *(ref: Ch.4, pp. 108-109)*

Science-Culture Reciprocal Influence

Throughout, the chapter emphasizes the reciprocal relationship: scientific paradigms shape cultural images of humanity, while societal pressures and values influence the development and acceptance of scientific theories. "Both developments within science itself and pressures from the rest of society may be bringing about a basic change in the scientific paradigm." *(ref: Ch.4, p. 102)*

Classical Science: Strengths and Limits

Foundational Strengths

- **Determinism:** The universe as a predictable machine with fixed laws; outcomes determined by initial conditions
- **Reductionism:** Complex phenomena understood by breaking down into simpler component parts
- **Objectivity:** Separation of observer from observed; elimination of subjective factors from experiments
- **Controlled Experiment:** Manipulation of specific variables while controlling others; reproducible methodology

Inherent Limitations

- **Complexity & Systems:** Inability to fully account for emergent properties, non-linear dynamics, and holistic relationships
- **Observer Effects:** Quantum mechanics demonstrates observer's role in creating reality; interference of measurement with phenomena
- **Taboo Phenomena:** Exclusion of consciousness, subjective experience, anomalous data challenging current paradigms
- **Premature Discoveries:** Scientific history shows resistance to insights arriving before conceptual framework exists (e.g., Galileo, meteorites, ESP)

Chapter 4 explores how these limitations have prompted paradigm shifts across multiple disciplines

Modern Physics: Quantum and Relativity

Quantum Revolution

- [Planck–Einstein–Bohr quantization](#) — Energy emitted in discrete packets ("quanta"), not continuously; Bohr incorporated fundamental discontinuity into atomic model (ref: pp. 75-76)
- [Heisenberg's uncertainty principle](#) — Impossibility of simultaneously measuring position and momentum with arbitrary precision; measurement itself disturbs the system
- [Complementarity](#) — Light exhibits both wave and particle properties (not simultaneously); paradox as intrinsic to nature, not a flaw in theory

Observer and Reality

- [Observer-participation](#) — Measurement affects the observed system; consciousness potentially involved in quantum outcomes
- [Universe as "mind stuff"](#) — Eddington described universe as "mind stuff"; Jeans characterized it as "more like a great thought than a great machine"

Cosmological Implications

- [Expanding universe](#) — No longer static; galaxies moving apart, spacetime itself stretching
- [Black holes](#) — Space-time singularities where classical physics breaks down
- [Many-worlds interpretation](#) — Everett's suggestion that all possible quantum outcomes actually occur, but observer sees only one reality frame (ref: p. 77)

Observer and "Mind-Stuff" Universe

New Scientific Metaphors

- **Sir Arthur Eddington's "mind-stuff":** Universe as fundamentally mental rather than material
 - "The stuff of the world is mind-stuff" — revolutionary reconceptualization of physical reality
 - Observer and observed are no longer separable in quantum frameworks
- **Sir James Jeans' cosmic conception:** "The universe begins to look more like a great thought than like a great machine"
 - Dramatic shift from mechanical Newtonian clockwork metaphor
 - Consciousness enters physics at the foundational level

Paradigmatic Implications

- **Subject-object dualism softens:** Observer effect in quantum mechanics challenges classical separation
 - Measurement as participation rather than passive observation
 - Blurring of boundaries between knower and known
- **Shift in scientific metaphors:** From mechanism to organism to consciousness
 - Reintegration of consciousness into scientific worldview
 - Bridge forming between physical science and experiential domains

"Both developments within science itself (e.g., changing metaphors) and pressures from the rest of society (e.g., disenchantment with the present science-technology thrust) may be bringing about a basic change in the scientific paradigm."

Cybernetics, AI, and Gödel

Computers as Extensions of Human Cognition

- Computers as more than "meat machines" — tools amplifying human thought and nervous system capabilities
- Human-computer integration shifting from mechanical metaphors to information-processing partnerships
- Cybernetic feedback systems mirroring biological regulatory mechanisms

Artificial Intelligence Development

- Progressive milestones: chess playing, theorem simulation, natural language understanding
- Functional capabilities grow while fundamental self-awareness remains elusive
- Information processing vs. consciousness distinction becoming critical as AI advances

Gödel's Theorem and Consciousness

- "Machine systems can never be conscious of themselves except by reference to another machine" (p. 78)
- Human consciousness possesses unified self-awareness lacking in computational systems
- Fundamental distinction: algorithms process information; consciousness experiences meaning
 - Implications for limits of AI and unique qualities of human experience
 - Questions the reductionist view of humans as merely complex machines

Life Sciences: DNA to Ecology

Genetics & Molecular Biology

- DNA discovery reframes life as information-processing system, not just chemistry
 - Genetic code as "program" — life now understood through information paradigm
 - Gene-environment interaction challenges determinism; introduces epigenetics
- Ethical frontiers: genetic engineering, synthetic biology, cloning raise questions about limits and applications

Evolutionary Ecology

- S-curve species growth models demonstrate finite resources/carrying capacity
 - Challenges unlimited growth assumptions in human systems
 - Suggests natural limits relevant to economics, population dynamics
- Cooperation beyond competition: Kropotkin's mutual aid complements Darwin's competition
 - Symbiosis, mutualism, and cooperative strategies increasingly recognized
 - "The main impetus for these studies is the need for man to evolve to a systematic image of his being, considerate of the survival of the whole species."
(p. 79)

Exobiology & Origins

- Chemical origins of life research: self-organizing complexity from simple molecules
- Cosmological biology: life as potential universal phenomenon
- Search for extraterrestrial intelligence — implications for humanity's self-image as unique or common

Brain Research: Split-Brain and Biofeedback

Hemispheric Specialization

- Split-brain research revealed distinct functions of cerebral hemispheres
 - Left hemisphere: analytical, sequential, verbal, mathematical
 - Right hemisphere: holistic, synthetic, spatial, intuitive, artistic
- Insights challenged unitary model of consciousness and cognition
- Parallels "tacit knowledge" distinction between explicit/implicit understanding

Biofeedback Revolution

- Discovery that "involuntary" physiological processes can be consciously regulated
 - "Individual provided with feedback has the ability to become conscious of, and in a limited way modify, the activities of both his own brain and the rest of his body" (p. 86)
- Applications extend to brain waves, heart rate, blood pressure, skin temperature
- Challenges mechanistic model that separates voluntary/involuntary systems

Ethical Implications

- Concept of a "psycho-civilized society" where behavior is electronically regulated
- Brain stimulation technology raises concerns about surveillance and control
 - Direct electrical control of emotions, memory, and cognition
 - Blurring boundary between therapy and social engineering
- Echoes broader questions about technology's role in human autonomy vs. control

Reference: Chapter 4, pp. 86-87

Consciousness Research: Methods & Findings

Hypnosis

- Defined as controlled state of attention, typically induced by another person
Enables communication with parts of mind usually outside of awareness
Research shows enhanced suggestibility and selective attention

Meditation & Dreams

- Meditation produces distinct physiological and psychological effects
Links to ancient traditions now studied scientifically
- Dream research through REM sleep monitoring
Documented role in creativity, problem-solving, memory consolidation

Psychedelic Research

- Controlled studies of hallucinogens (in clinical settings)
Effects on perception, creativity, and "transcendent experiences"
Potential therapeutic applications being re-explored

Taxonomy of States

- Scientific movement toward classification of consciousness states
Beyond binary conscious/unconscious to spectrum of states
Integration of traditional knowledge with empirical findings

Reference: "Changing Images of Man", Ch. 4, pp. 88-92

Unconscious and Superconscious

Unconscious Processes

- Scientific acceptance of unconscious mental processes as legitimate area of study
- Recognition that consciousness is only the "tip of the iceberg" of mental activity
- Acknowledgment that many decisions and behaviors stem from non-conscious sources

The Superconscious Frontier

- Growing research interest in "higher" states beyond ordinary waking consciousness
- Superconscious processes increasingly studied as sources of:
 - Intuition – direct knowing without conscious reasoning
 - Inspiration – seemingly externally sourced creative impulses
 - Creativity – integrative insights and novel connections
- Scientific investigation of experiences historically relegated to mysticism or spirituality

Research Implications

- New methods emerging to study previously unmeasurable subjective phenomena
- Challenge to standard models that equate consciousness with brain activity alone
- Potential bridge between scientific and contemplative traditions

Chapter 4 reference: pp. 88-90

General Systems Theory

Definition & Core Principles

- A transdisciplinary approach integrating holism and empiricism, developed primarily by Ludwig von Bertalanffy (1950s)
- Provides conceptual framework for understanding complex phenomena across different disciplines
- Studies organizations as systems of interrelated parts that interact with environments

Key Concepts

- Feedback loops: Self-regulating mechanisms that maintain system stability
 - Negative feedback (homeostatic) — maintains equilibrium
 - Positive feedback — amplifies changes, leads to growth or decline
- Hierarchy: Nested systems within systems (holons); higher levels emerge from lower levels
- Self-organization: Spontaneous order arising from local interactions without central control
- Homeostasis: Tendency to maintain internal stability despite external fluctuations

Applications

- Biology: Organism as integrated whole; ecosystem interdependencies
- Social systems: Families, communities, organizations as adaptive networks
- Economics: Markets as self-regulating systems with feedback mechanisms
- Focus on open systems: Continuous exchange of matter, energy, information with environment

Reference: p. 100 — "General systems theory is in essence an attempt to integrate in rational terms, with appropriate metaphors, the diverse knowledge flowing from the whole of scientific investigation."

Table 5: Historical Analogy for New Scientific Paradigm

Paradigm	Epistemological Focus	Key Characteristics	Scientific Implications
Classical/Current (Greek Foundation)	"Epistemology of the Other"	Outward focus, objective analysis, separation of observer and observed, detached empiricism	Physical sciences paradigm, reductionism, value-neutral stance, third-person methodologies
Emerging/Future (Eastern & Mystical)	"Epistemology of the Self"	Inward focus, participatory knowing, unity of observer and observed, experiential validation	Consciousness research, systems thinking, value-explicit inquiry, first-person methodologies

Table 5 presents a historical analogy showing how the revolutionary paradigm shift in science may mirror earlier epistemological transitions

Historical Pattern

The table suggests a historical pattern where major scientific paradigm shifts involve complementary epistemological approaches. Just as Greek philosophy established the foundation for "objective" science through its outward-focused epistemology, a similar revolutionary shift may now be occurring toward incorporating subjective, experiential methods that have been traditionally associated with Eastern and mystical traditions.

Justification for Subjective Method

This historical analogy provides critical justification for integrating subjective methodologies into science proper. Just as the Greek epistemological revolution enabled the development of Western science, the incorporation of "epistemology of the self" may enable the next evolutionary step in scientific understanding—particularly for domains where observer and observed cannot be fully separated (quantum physics, consciousness research, complex systems). This does not replace objective methods but complements them.

Reference: "Changing Images of Man", p. 106, Table 5 - Historical analogy for exploring feasibility of new paradigm

Emerging Paradigm I

First three characteristics of an emerging scientific paradigm that challenges traditional boundaries while respecting past achievements

Characteristic #1: Inclusive

- Embraces old science as a **special case** within a more holistic framework
- Extends rather than replaces classical paradigms, similar to relativity incorporating Newtonian physics
- Reconciles seemingly disparate scientific traditions into a more comprehensive whole

Characteristic #2: Eclectic Methods

- Not wedded exclusively to controlled experiments; methodological pluralism
- Balances **reductionistic** (analysis) and **teleological** (purpose-driven) explanations
- Acknowledges different types of questions require different investigative approaches

Characteristic #3: Incorporates Subjective Experience

- Makes room for systematization of subjective domains previously left to humanities and religion
- Recognizes first-person experience as valid data requiring appropriate methodologies
- Expands scientific inquiry to include consciousness, meaning, and lived experience

Emerging Paradigm II

Continuing the characteristics of the possibly emergent scientific paradigm:

(4) Participative Inquiry

Breaking down the dichotomy between observer and observed. Acknowledges that investigators influence their subjects and data through the very act of observation. Promotes open, participative investigation where researchers are recognized as part of the system being studied.

(5) Moral Inquiry

Explicit incorporation of values, recognizing that science is not "value-free." Investigates what values are wholesome and life-enhancing rather than pretending neutrality. Embraces responsibility for the ethical implications of scientific research and technological applications.

(6) Complementarity

Reconciles apparent opposites through higher-order integration, similar to wave-particle duality in quantum physics. Addresses dichotomies that have troubled science and philosophy: free will/determinism, materialism/transcendentalism, science/religion, objectivity/subjectivity.

From analysis of frontier scientific developments and paradigmatic tensions (ref: pp. 108-109)

Emerging Paradigm III

Final Characteristics of the New Scientific Paradigm

- **7. Hierarchical levels of consciousness** — Recognition of a spectrum from ordinary to "higher" states
 - Acknowledges consciousness as operating across multiple levels and dimensions
 - Validates both subconscious processes (below ordinary awareness) and superconscious functions (beyond ordinary awareness)
 - Supports structured investigation of meditation, creativity, peak experiences as legitimate scientific inquiry
- **8. Unified view of exceptional human experiences** — Integration of previously separated phenomena
 - Brings together "creativity," "intuition," "hypnosis," "religious experience," and "psychic phenomena" under coherent theoretical framework
 - Permits scientific study without reducing these experiences to mere epiphenomena
 - Offers explanatory models that bridge objective measurements with subjective significance
 - Recognizes that traditional divisions between these experiences may be artificial boundaries rather than inherent differences

These final characteristics complete the emerging paradigm that would transform scientific methodology and worldview while incorporating valid aspects of classical science. (pp. 108-109)

Ch. 5 Overview: Characteristics of an Adequate Image

Chapter 5 presents six essential characteristics that a new image of humankind must possess to become dominant and effective in addressing contemporary societal problems and guiding the transition to a post-industrial future.

Six Essential Characteristics

The chapter argues that an adequate image must include: (1) a holistic sense of perspective, (2) an ecological ethic, (3) a self-realization ethic, (4) multi-dimensional and integrative qualities, (5) balanced coordination of satisfactions, and (6) an experimental and open-ended orientation. *(ref: p. 113)*

Purpose

The primary purpose of these characteristics is to overcome fragmentation, alienation, and ecological destruction that have become prevalent in the late industrial era. Together, they provide a foundation for reintegrating meaning, ethics, and human development within a holistic framework. *(ref: pp. 113-114)*

Integration of Past and Future

These characteristics build upon successful aspects of previous images while addressing their limitations. The chapter argues that "any image of humankind that has guided a stable society...must be assumed to be rooted in the human experience of its time and place and in that sense valid." The new image must integrate these elements rather than oppose them. *(ref: p. 117)*

Transformative Potential

The chapter concludes that these characteristics could facilitate the "productive transition from an industrial past to a post-industrial future" by portraying "the person and human culture as growing elements in an evolving cosmos." This evolutionary perspective makes change an integral part of human life rather than something to be resisted. *(ref: p. 121)*

Characteristic 1: Holistic Sense of Perspective

A New Integration of Self, Society & Universe

- **Reintegration Imperative:** "A holistic perspective and understanding of life seems absolutely vital if we are to overcome the fragmentation and alienation that have become so common in the latter part of the industrial era." (p. 114)
- **Meaning in a Post-Mythic World:** Replace functions once served by pre-scientific myths and rituals with a contemporary sense of meaningful purpose and integration
- **Beyond Specialization:** Serve to reintegrate specialized and competing images that currently contend with each other in modern society
- **Construction Processes:** Lead to discovery mechanisms through which an integrative perspective is maintained, continually renewed, and transmitted

Addressing Modern Fragmentation

- **Historical Context:** Industrial era emphasized specialization, reductionism, and compartmentalization of knowledge and experience
- **Psychological Impact:** Widespread sense of alienation—from nature, from community, from meaning itself
- **Evolutionary Necessity:** Only with a reintegrated sense of "what it is all about" can continued evolution and functions once served by myth be fulfilled
- Orientation within larger cosmic context
- Coherence between personal, social, and ecological levels
- Shared foundation for collective purpose and action

Reference: p. 114, "Characteristics of an Adequate Image of Humankind"

Characteristic 2: Ecological Ethic

Core Elements

- **Finite resources awareness** — Recognizes that available resources and space are limited; portrays human as integral part of natural world rather than separate from it
- **"New scarcity" ethic** — Embraces "doing more with less" in response to planetary constraints; fosters resourcefulness and frugality
- **Partnership with nature** — Acts to harmonize ecological relationships rather than dominate; establishes sustainable recycling mechanisms and homeostatic balance
- **Mutual self-interest** — Expands concern beyond individual to fellow humans and all living creatures (present and future)

Beyond the Biosphere

- **Cultural ecology** — Balanced processes and need-satisfaction among diverse cultures and traditions
- **Institutional ecology** — Coordination between arts, humanities, sciences, politics, and other social domains
- **Intra-psychoic ecology** — Harmony among various aspects of self and psychological functioning

Reference: p. 114

Characteristic 3: Self-Realization Ethic

Core Concept

- Individual experience as the proper end of evolutionary development — personal growth and self-fulfillment as primary values
- Replaces the man-over-nature ethic and material-growth-consumption ethic that has led to current global problems

Key Elements

- Social institutions redefined as environments fostering self-development rather than ends in themselves
- Complements the ecological ethic — not contradictory but mutually reinforcing
 - Ecological ethic emphasizes community of life-in-nature and oneness
 - Self-realization ethic emphasizes development of individual potential
- Counters purely materialistic pursuits by focusing on growth in awareness, creativity, and consciousness

Practical Applications

- Education systems that foster creativity and personal development, not just vocational training
- Economic structures valuing fulfillment and contribution over mere consumption
- Societal prioritization of psychological well-being alongside material security

Source: Changing Images of Man, p. 115

Characteristic 4: Multi-Dimensional, Multi-Faceted, and Integrative

Integrating Fragmented Images

- Reversal of increasing fragmentation caused by specialization and reductionism in industrialized societies
- Reconciliation of apparent dichotomies between opposing images (like quantum theory reconciled wave and particle images)
- Avoids ideological conflict that arises when social policies based on old images compete for dominance

Building on Past Successful Images

- Any image that guided a stable society (primitive or sophisticated, Eastern or Western) must be rooted in human experience
- New image cannot oppose these restricted images but must incorporate them as special cases of limited validity
- Similar to how relativistic physics includes Newtonian mechanics as special case

Multi-level Integration

- Maintains differentiation while integrating — not blurring distinctiveness or validity of specialized perspectives
- Orders various aspects of existence across multiple levels:
 - Physical
 - Organic
 - Social
 - Psychical
 - Spiritual
- Integrates contributions from various disciplines while serving needs of individuals and groups at varying degrees of maturity and modernity

Reference: pp. 117-118

Characteristic 5: Balance & Coordination of Satisfactions

Systems View of Satisfaction

- Maximizing along one narrowly defined dimension is insufficient for quality of life
- Balance and coordination stem from ecology and general systems theory (as well as cultural wisdom traditions)
- "Satisficing" across multiple dimensions rather than maximizing one metric

Corrective to Industrial Values

- Provides needed corrective to one-sided life style focused on standard of living
- Challenges value-empty economics and science that dominate industrial society
- Hierarchical structure of human needs requires coordinated approach to serve well-being

Practical Implementation

- Near-term utility must align with long-term transformation goals
- Image should point to achievable and preferable transformed state of society
- Must have functional utility in the present, not just idealized future vision
- Ethics that are immediately practical rather than abstract or disconnected

Reference: pp. 119-120

Characteristic 6: Experimental & Open-Ended

Self-Consciously Evolutionary

- The new image must embrace its own transience and evolution rather than becoming fixed and dogmatic
- Anticipate—rather than just react to—the necessity for paradigm changes in society
- Avoid the pattern of image obsolescence and crisis currently facing modern society

Realizable Vision with Space for Growth

- Present a vision that is unrealized but appears realizable—a direction not a destination
- Acknowledge incompleteness by pointing to the "greater mystery" beyond itself
- Enable and encourage further exploration of both individual and cultural potential

Key to Productive Transition

- The open-ended, evolutionary nature may be the most crucial aspect for moving from industrial to post-industrial society
- Incorporate contributions from both subjective processes and objective sciences
- Portray human culture as growing elements in an evolving cosmos

"If personal and social evolution is seen as an integral part of human life, then perhaps much less impetus would be required to bring about needed change." (p. 121)

Ch. 6 Overview: Feasibility of an Integrative, Evolutionary Image of Man

Having established the characteristics of an adequate image of humankind, this chapter examines the crucial question: How feasible is it that such an integrative, evolutionary image might come to dominate society in the near future?

Two Feasibility Tests

The chapter applies two distinct tests: conceptual feasibility (is it logically coherent and intellectually defensible?) and operational feasibility (can it realistically emerge and become dominant in society?). *(ref: pp. 125-161)*

Conceptual Elements

Draws on multiple traditions to build a coherent image: general systems theory, the human as biocomputer, consciousness/state theories, evolutionary models, and the Perennial Philosophy. Central concepts include the "gradient" of awareness, personal/transpersonal aspects of self, and the holon (part/whole) metaphor. *(ref: pp. 125-141)*

Operational Pathways

Explores transformational processes across multiple domains: cultural revitalization movements (Wallace), scientific paradigm shifts (Kuhn), mythic transformations (Campbell's monomyth), and personal transformations (psychotherapy models). Identifies patterns of crisis, reformulation, and integration common to all. *(ref: pp. 142-157)*

Synthesis

The image is judged conceptually feasible as metaphor (not dogma) with potential operational pathways emerging through both deliberate cultivation and crisis response. Emphasizes importance of imagining and facilitation, not manipulative engineering of change. *(ref: pp. 158-161)*

Elements of New Image & Gradient Concept

The Gradient Defined

- "The grade or ascent... a series of transitional forms, states, or qualities connecting related extremes" (Webster, cited p. 126)
- A metaphorical structure organizing human development, experience, and potential
- Provides conceptual framework for integrating diverse images of humankind

Applications of Gradient Framework

- **Needs Hierarchy:** From basic survival/physiological needs through social needs to self-actualization (Maslow)
- **Awareness/Consciousness:** Progression from unconscious to conscious to expanded states of awareness
- **Moral Development:** Evolution from punishment orientation to universal ethical principles (Kohlberg)
- **System Complexity:** Hierarchy of increasing complexity and order in biological, social, psychological systems

Theoretical Integration

- Synthesizes contributions from systems theory, psychology, biology, and spiritual traditions
- Links phylogenesis (species evolution), ontogenesis (individual development), and sociogenesis (cultural evolution)
- Provides framework for reconciling seemingly contradictory images of humanity
- Non-dogmatic: Treated as useful metaphor rather than rigid, literal description

Reference: pp. 125-126

Table 6: Three Dimensions of the Gradient

Dimension	Level 1	Level 2	Level 3	Level 4	Level 5
Biocomputer Programs	Genetic Inheritance	Subconscious	Normal Waking Awareness	Transcendent/Metaprogramming	-
Maslow's Hierarchy	Physiological Needs	Safety Needs	Love/Belonging	Esteem	Self-Actualization
Kohlberg's Morality	Obedience/ Punishment	Self-interest/ Exchange	Interpersonal Conformity	Law & Order/ Social Contract	Universal Ethical Principles

Table 6 (pp. 128-129) - Three parallel dimensions representing human development gradients

The Gradient Concept

The gradient model represents "series of transitional forms, states, or qualities connecting related extremes" (p. 126). These three parallel hierarchies illustrate complementary aspects of human development—cognitive programming, motivational needs, and moral reasoning—each progressing from basic/concrete to complex/abstract levels of awareness and functioning.

Integrative Potential

These parallel dimensions demonstrate how an integrative image of the person incorporates multiple theoretical frameworks. The alignment suggests that human development proceeds through consistent stages across different domains. This multi-dimensional gradient serves as a core metaphor for the proposed evolutionary image of humankind, showing our capacity for growth across biological, psychological, and ethical dimensions.

Reference: "Changing Images of Man", pp. 128-129, Table 6

The Self: Personal and Transpersonal

Three Levels of Self

- **Lower Transpersonal/Collective Unconscious:** The shared, underlying substrate of human consciousness; transpersonal rather than individual; includes archetypes, collective memory, and species-wide tendencies
- **Personal/Egoic Self:** The individualized consciousness and identity; sensory experience, personality, unique biography, and rational mind; the self as normally understood in Western psychology
- **Higher Transpersonal/Superconscious:** Intuitive, mystical, expansive aspects of consciousness; creativity, inspiration, heightened awareness, spiritual dimensions, and transcendent potential

Integration Model

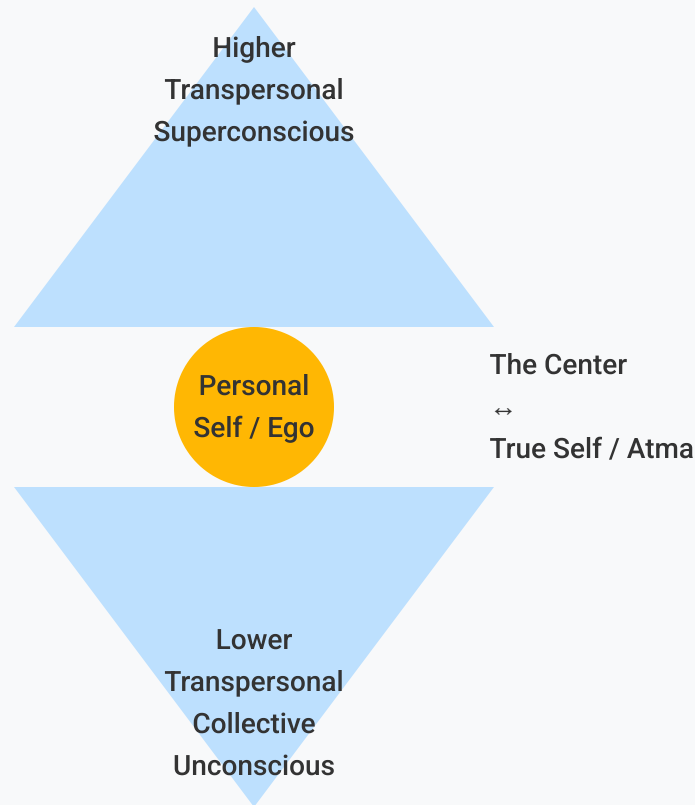
- The "hourglass" metaphor: Person as a nexus between transpersonal realms, narrow in the middle (egoic self), expanded at both ends (ref: pp. 133–136)
- F.W.H. Myers' personal-transpersonal mind/body model: Consciousness flows between levels rather than being fixed
- Realization of the true Self or "atma" involves integration and recognition across all levels—"smaller than the smallest atom, greater than the greatest spaces"

Developmental Implications

- Growth involves both deepening access to collective foundations and expanding toward superconscious potentials
- Integration rather than transcendence alone—all levels participate in the whole person
- The "Center" as the unifying principle that connects all aspects of the divided self

Reference: pp. 133-136

Figures 9–16: Models of Consciousness



Complementarity of Images

The figures present a composite model integrating various perspectives of consciousness, showing how seemingly contradictory images of humanity can be understood as complementary views of the same reality at different levels.

Hourglass/Cone Metaphor

This visual metaphor depicts consciousness as an hourglass or cone shape with the personal self/ego at the center, connected to both transpersonal domains—the superconscious above and collective unconscious below.

The Center Concept

At the deepest level is "The Center" (atma/Self)—the only truly static point from which all manifestations arise. From this perspective, all partial images partake equally of the whole.

Reference: "Changing Images of Man", pp. 126-137, Figures 9-16

The Center and Holon Metaphors

The Center Concept

- The "Center" represents the only truly static image within the integrative model
- Acts as a unifying point from which all partial images emerge and to which all return
- All outer manifestations and partial images partake equally of this Center
- Draws from Perennial Philosophy: "The atma, the Self... concealed in the heart of all beings" (ref: p. 135)
- Represents the ultimate unity beneath apparent diversity of images and perspectives

The Holon Concept

- Term coined by Arthur Koestler to describe entities that are simultaneously wholes and parts
- The person as "holon": both autonomous individual and component of larger systems
- Each person exists within nested hierarchies of increasing complexity and order
- Neither purely reductionist nor purely holistic—transcends this dichotomy
- Bridges systems theory and personal experience; enables integration across levels (ref: pp. 136-138)

Metaphorical Integration

- These metaphors enable integration of seemingly contradictory images
- Provides conceptual framework for both unity (Center) and diversity (nested holons)
- Supports the evolutionary/integrative image's capacity to include previous images

Testing Conceptual Feasibility

The proposed integrative, evolutionary image of humankind appears conceptually feasible when assessed against essential criteria, though with important nuances and cultural considerations. Here we examine its viability and limitations:

1

Meets Core Requirements

The proposed image satisfies the six characteristics established in Chapter 5: holistic perspective, ecological ethic, self-realization ethic, multi-dimensionality, balancing satisfactions, and experimental openness. It integrates scientific, philosophical, and spiritual dimensions, offering a unifying but non-reductive framework for human development.

2

Metaphoric Not Dogmatic

The gradient model must be understood as a useful metaphor rather than proven theory or definitive structure. It provides organizing principles without imposing fixed categories. This metaphoric approach allows for adaptation across cultures, disciplines, and evolving understandings of human nature.

3

Cultural Alternatives

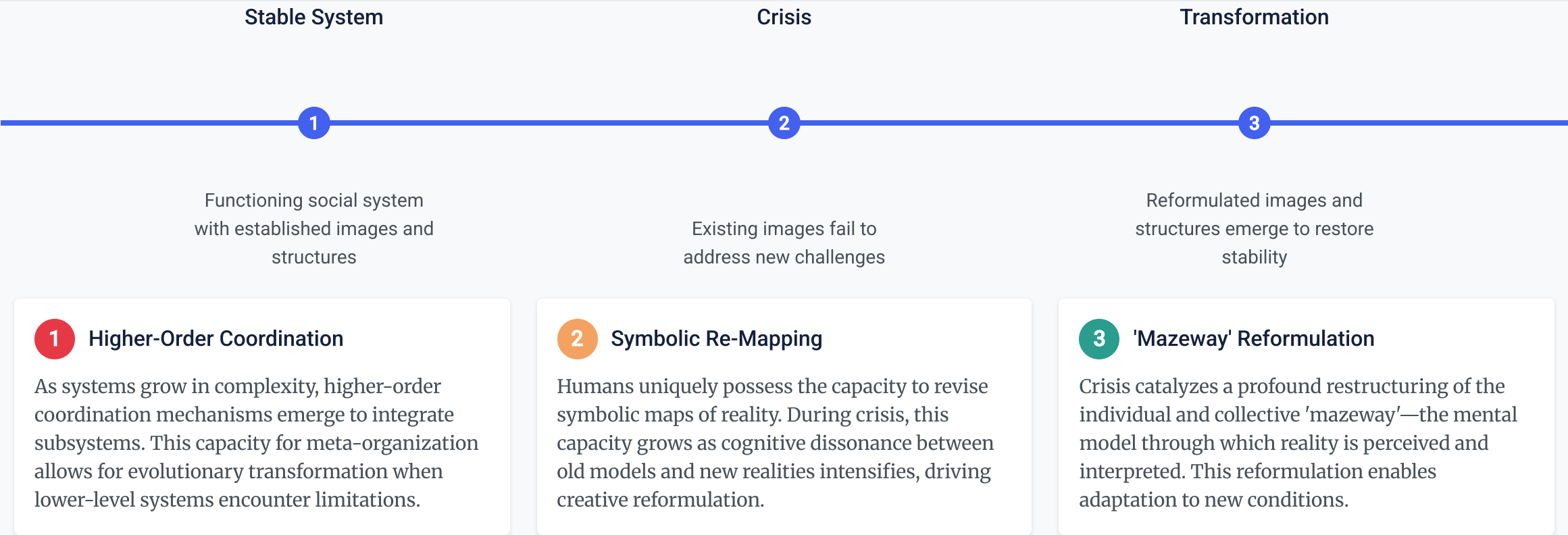
Hierarchical gradient models reflect Western bias toward linear progression and may not resonate with all cultural perspectives. Alternative network/circular frameworks (like uroborus models) offer complementary approaches for cultures with mutualistic rather than hierarchical paradigms.

Conceptual Synthesis

The integrative image achieves conceptual feasibility by treating each partial image (e.g., human as animal, as mechanism, as person, as spirit) as valid within specific contexts, while proposing that true maturity involves the capacity to move fluidly among these modes as appropriate. This meta-perspective transcends traditional either/or oppositions.

References: pp. 140-141

Transformation in Response to Crisis

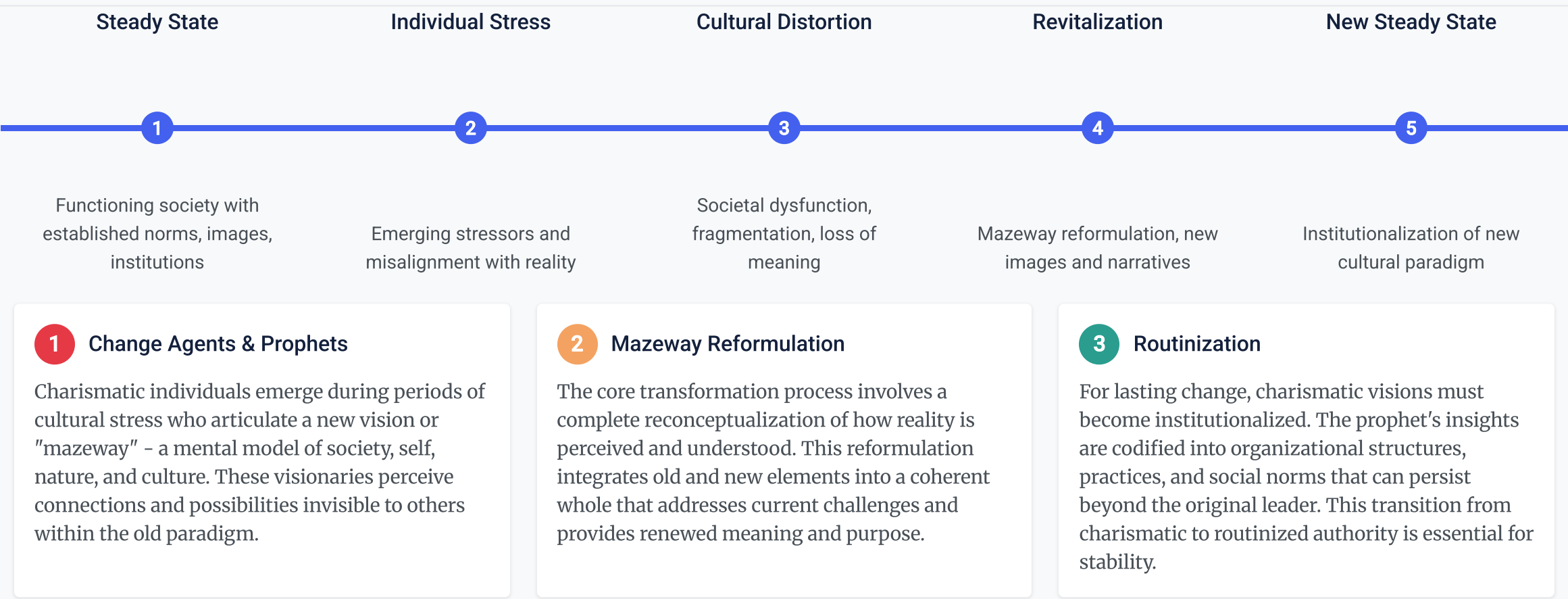


Key Insight

Transformation occurs not merely as automatic adaptation, but through the conscious reimagining of fundamental images and metaphors. Crisis creates both the necessity and the cognitive openness for such reimagining, potentially enabling evolutionary leaps rather than mere incremental changes.

Reference: "Changing Images of Man", p. 142

Cultural Transformations (Wallace)

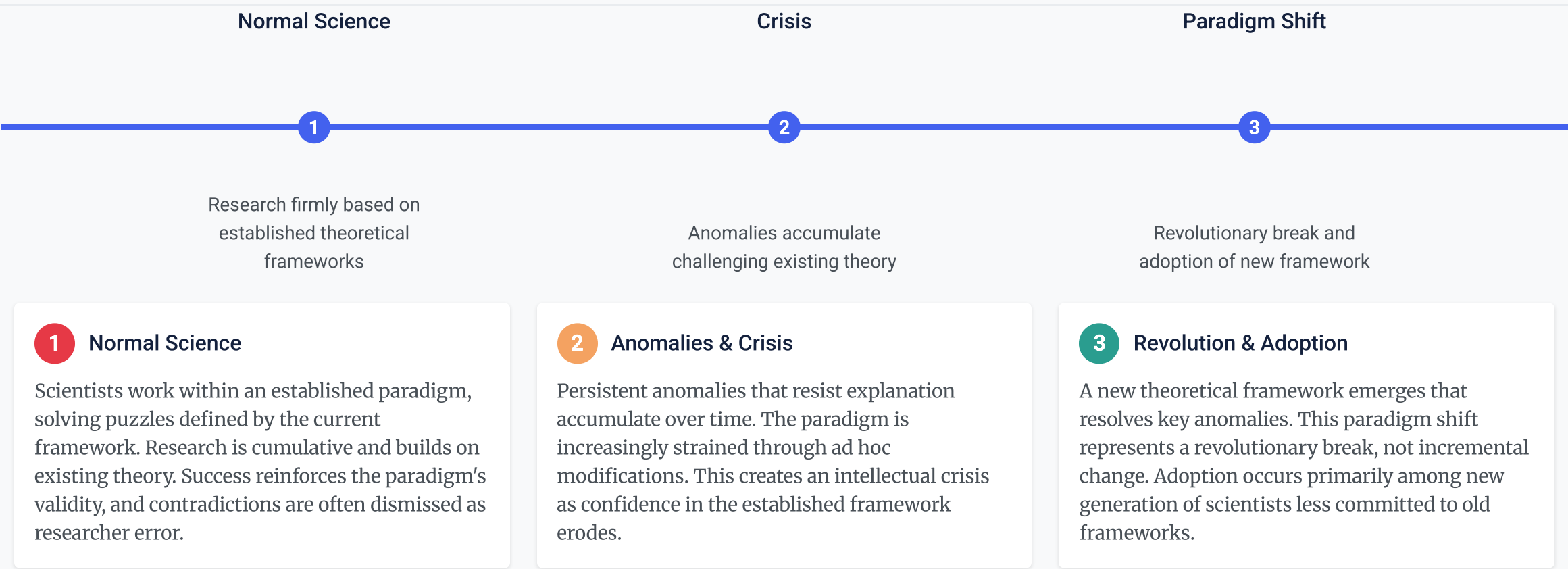


Key Insight

Wallace's model shows cultural transformation is not merely reactive adaptation but an active, creative process of reimagining fundamental structures. The most successful revitalization movements maintain elements of the existing culture while integrating them into a new, more adaptive framework. Transformation is facilitated by both individual visionaries and collective participation.

Reference: Wallace's revitalization theory (p. 144); Similarities with Kuhn's paradigm shifts (p. 145)

Scientific Revolutions (Kuhn)

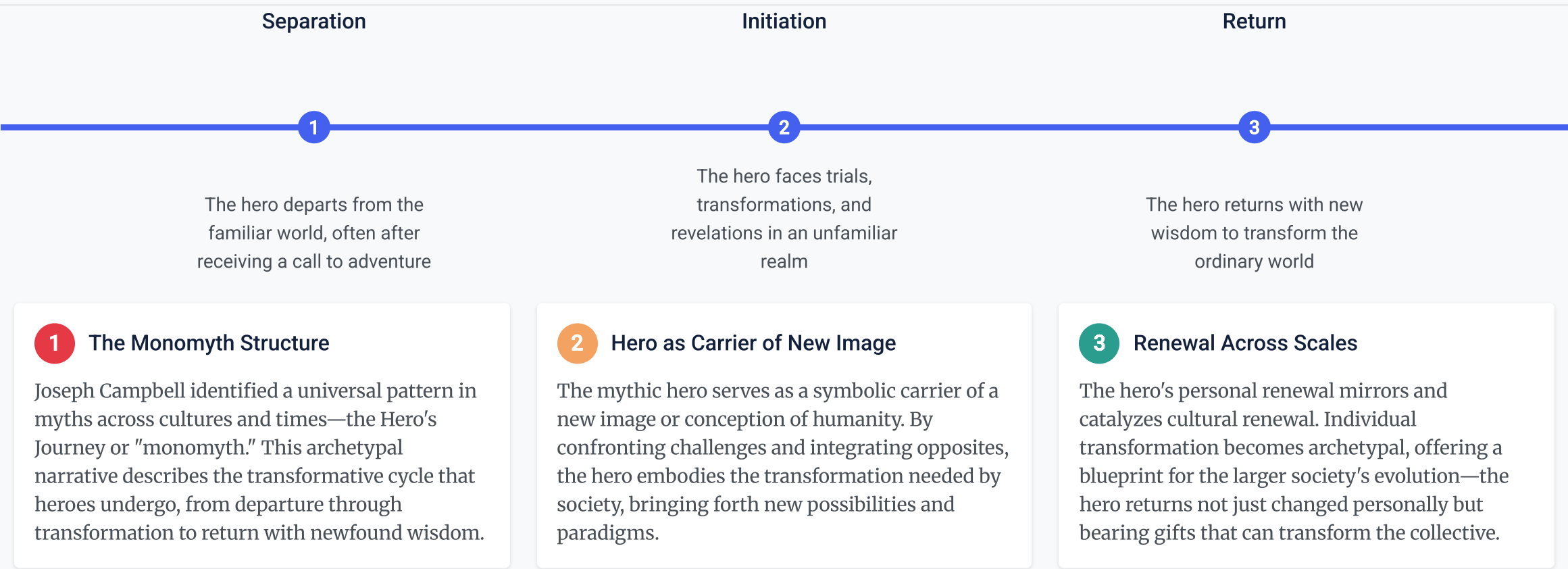


Mirroring Cultural Processes

Scientific revolutions follow patterns strikingly similar to cultural transformations. Both involve periods of stability, accumulating tensions with established frameworks, crisis when old models prove inadequate, and revolutionary reformulation followed by gradual acceptance. This parallel suggests a universal pattern in how human systems transform.

Reference: "Changing Images of Man", pp. 145-146

Mythic Transformations (Campbell)

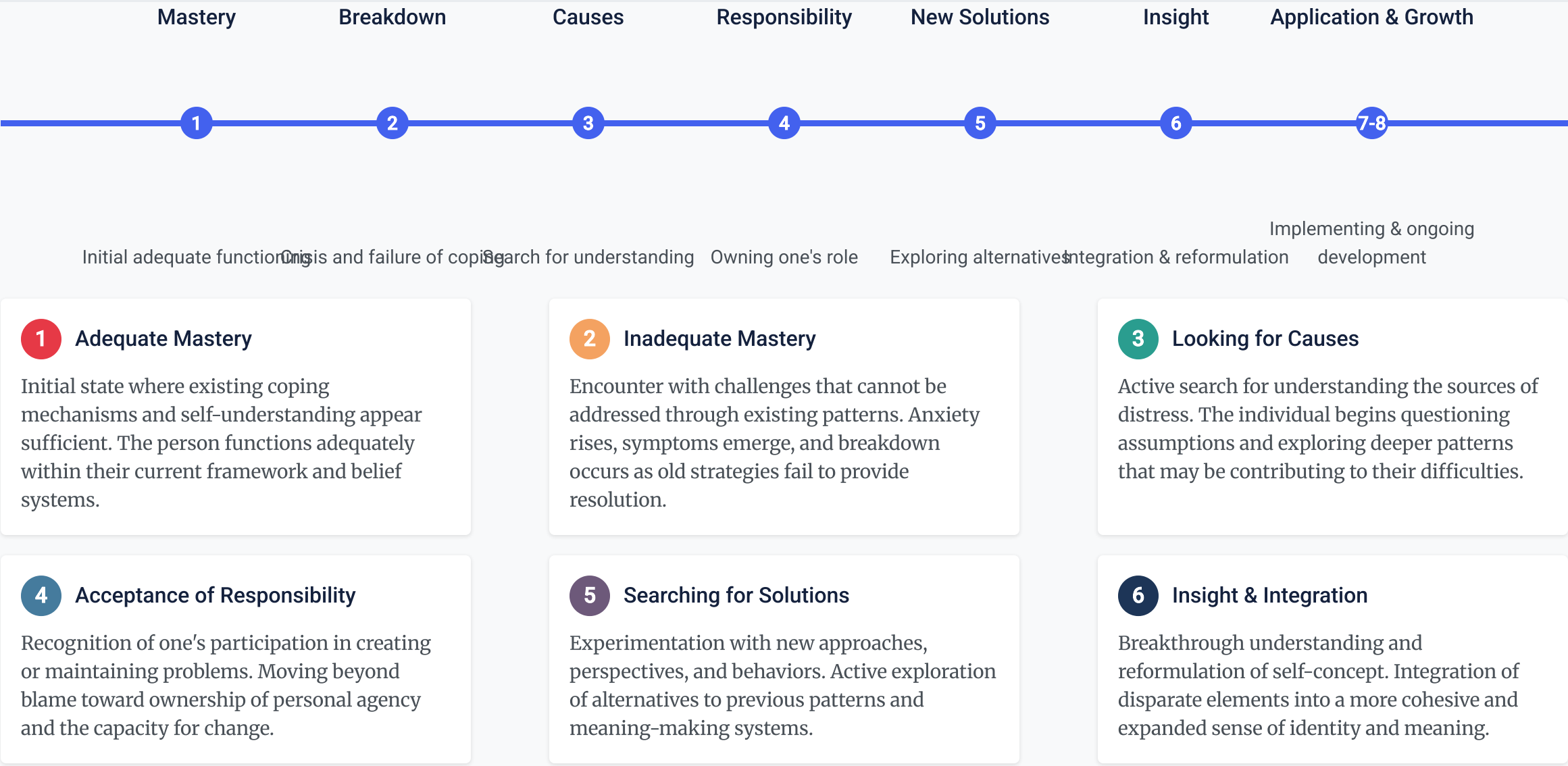


Key Insight

The monomyth reflects not merely an entertaining story pattern, but a profound model of psychological and cultural transformation. Just as heroes undergo death and rebirth symbolically, societies can experience the dissolution of outdated images and the emergence of new ones. This pattern provides a blueprint for understanding how transformative imagery enters culture through individual pioneers.

Reference: "Changing Images of Man", p. 146; Campbell, "The Hero with a Thousand Faces"

Personal Transformations (Psychotherapy)



Parallels with Creative Process

The psychotherapeutic transformation follows patterns similar to the creative cycle: Preparation (stages 1-2), Incubation (stages 3-4), Illumination (stage 5-6), and Verification/Application (stages 7-8). Both involve disruption of old patterns, reorganization of meaning, and emergence of new integrative structures.

Reference: "Changing Images of Man", pp. 147-149

Table 7: Transformation Stages Compared

Stage	Myth (Campbell)	Culture (Wallace)	Science (Kuhn)	Psychotherapy
Initial State	Ordinary world	Steady state	Normal science	Adequate mastery
Crisis/Breakdown	Call to adventure, separation	Individual stress, cultural distortion	Anomalies accumulate, crisis	Breakdown, anxiety, search for causes
Transformation	Initiation, supreme ordeal, apotheosis	Mazeway reformulation, revitalization	Paradigm shift, revolution	Insight, reformulation, integration
New Stability	Return with elixir	New steady state, routinization	New normal science	Application, open-ended growth
Creativity Parallel	Inspiration	Preparation	Incubation	Illumination → Verification
Table 7 (p. 149) demonstrates the striking parallels in transformation processes across different domains				

Cross-Domain Transformation Patterns

Table 7 reveals remarkable similarities in how transformative change occurs across diverse domains of human experience. Whether in mythology (Campbell's monomyth), cultural revitalization movements (Wallace), scientific paradigm shifts (Kuhn), or individual psychological growth, all follow a similar pattern: initial stability, breakdown/crisis, reformulation/transformation, and integration into a new stability. The creative process shows similar phases (preparation, incubation, illumination, verification).

Cross-Domain Resonance

The cross-domain resonance suggests that transformation may follow universal patterns regardless of scale (individual to civilization) or domain (subjective to objective). This provides a powerful pedagogical tool for understanding change processes. The table supports the hypothesis that major shifts in images of humankind follow recognizable cycles that can be anticipated and potentially facilitated rather than resisted.

Reference: "Changing Images of Man", p. 149, Table 7

Fostering Transformation: "Imagining Makes It So"

The Power of Images & Autosuggestion

- Images shape reality through cognitive and social feedback loops (ref: pp. 153-154)
- Autosuggestion research shows beliefs/expectations influence biological and behavioral outcomes
- Historical evidence: societies' dominant metaphors guide their development trajectories

Art & Media as Transformation Vehicles

- Artistic expressions can seed new social paradigms before they become explicit (ref: p. 155)
- Multi-sensory media create more powerful image imprinting than purely intellectual discourse
- Alternative futures become conceivable through creative representation before policy formalization

Cautions & Ethical Guidelines

- Avoid manipulative mass-movements which often lead to charismatic rather than systemic transformations (ref: p. 156)
- Danger of "propaganda engineering" — coordinated mythology can become social control
- Preference for pluralistic facilitation: diverse, participatory approaches over centralized engineering
- Support network-based, decentralized change processes respecting autonomy

"What is required for successful fostering of a new image is not propaganda but... a natural process of emergent self-discovery and exploration." (p. 156)

Ch. 7 Overview: Contrasting Futures

Chapter 7 presents two sharply contrasting images of the future for society, examining how they would shape institutional structures, social goals, and human relationships. These contrasting visions demonstrate the profound impact that underlying images have on societal development.

Two Alternative Images

The chapter analyzes two fundamentally different paths: the **Technological Extrapolationist** image (continuation of industrial era premises: rationalistic, mechanistic, individualistic, materialistic) versus the **Evolutionary Transformationalist** image (balancing rational/intuitive, decentralized, participatory, steady-state oriented). *(ref: pp. 164-165)*

Evaluation Framework

Each image is evaluated through multiple lenses: historical roots (Tables 8-9), comparative attributes (Table 10), societal consequences (ecological impacts, equality, legitimacy), institutional changes (governance, economics, education), and individual/social goals (material vs. self-actualization focus). *(ref: pp. 166-168)*

Central Tension

The analysis reveals a fundamental trade-off: the extrapolationist path appears stable in the short term but risks "friendly fascism" or collapse long-term, while the transformationalist path may increase temporary disorder but promises greater adaptability, fulfillment, and resilience. *(ref: pp. 169-173)*

Decision Criteria

The chapter suggests evaluating both paths based on their ability to address key dilemmas: scarcity, participation, control, equity in resource distribution, and balancing individual freedom with social responsibility—challenges that purely technological solutions cannot resolve. *(ref: pp. 176-179)*

Tables 8–10: Roots & Contrasts of Alternative Images

Table 8: Historical Roots of Technological Extrapolationist Image

Component	Historical Source
Rationalism	Enlightenment, scientific method, mechanistic paradigm
Materialism	Industrial era, economic metrics, consumption culture
Control metaphor	Cybernetics, behavioral engineering, technocratic governance

Table 9: Historical Roots of Evolutionary Transformationalist Image

Component	Historical Source
Ecological ethic	Systems theory, indigenous wisdom, environmental movement
Self-actualization	Humanistic psychology, perennial philosophy, consciousness research
Participative model	Democratic movements, cooperative economics, decentralization

Table 10: Illustrative Contrasts Between Images

Dimension	Technological Extrapolationist	Evolutionary Transformationalist
View of human nature	Determined, competitive, rational calculator	Evolving, creative, conscious agent
Resource allocation	Market efficiency, expert management	Participative planning, communal stewardship
Social order	Centralized control, technical solutions	Decentralized diversity, adaptive learning

Simplified representation of Tables 8, 9, 10 (pp. 166-168) comparing future trajectory foundations

Contrasting Historical Foundations

These tables illustrate how two competing visions of the future are grounded in different historical traditions and premises. The technological extrapolationist image extends industrial-era values and structures, while the evolutionary transformationalist image draws from emerging holistic, ecological, and consciousness paradigms. These contrasting roots lead to fundamentally different approaches to social organization, resource allocation, and human development.

Key Decision Points

The divergent images represent a critical choice point for society. Each trajectory’s core assumptions about human nature, social organization, and relationship with nature yield vastly different futures. The technological path offers stability through control but risks alienation and ecological damage, while the transformational path promises greater fulfillment but requires navigating uncertain transitions. Rather than pure either/or choices, the near-term may involve elements of both in dynamic tension.

Reference: "Changing Images of Man", pp. 166-168, Tables 8, 9, 10

Technological Extrapolationist Characteristics & Trends

Core Approach & Values

- Rational-utilitarian framework emphasizing empirical, secular, pragmatic, and explicitly quantifiable measures
- Continuation and intensification of industrial era's driving forces and premises
- Materialist orientation with emphasis on economic efficiency over human experience

Institutional & Structural Trends

- Increasing centralization and concentration of economic and political power
- Evolution toward managed society with complex bureaucratic coordination
- Mega-urbanization and unwieldy metropolitan agglomerations
- Growing reliance on specialist "knowledge elites" despite anti-intellectual trends

Technological & Control Systems

- Rapid development of social, political, and behavioral engineering techniques
- Investment in security technologies and surveillance for stability maintenance
- Shift from basic research to applied R&D focusing on institutional needs
- Presumed inevitability of technological solutions to social problems

Reference: pp. 164-167

Technological Extrapolationist Consequences & 'Friendly Fascism'

Societal Consequences

- Ecological intensification: Environmental problems worsen despite technological "fixes"; limits of planetary systems reached
- Growing gaps in affluence: Inequality deepens between groups, heightening social strife and unfulfilled expectations
- Legitimacy crisis: Increasing questioning of institutions, as they serve own needs rather than human needs
- Surveillance & behavioral control: Advanced technologies enable unprecedented monitoring and conditioning

Gross's "Friendly Fascism" Concept

- Definition: "A managed society which rules by a faceless and widely dispersed complex of warfare-welfare-industrial-communications-police bureaucracies" (p. 169)
- Characteristics:
 - Not traditional totalitarianism, but bureaucratic control with democratic façade
 - Erosion of individual freedoms justified by stability, efficiency, harmony
 - Advanced "psycho-technologies" for behavior management
 - Public acquiescence through security and comfort promises

Long-term Trajectory

- Technological momentum creates system difficult to redirect
- Rising crisis of meaning amid material plenty
- Depletion of resource base that sustains industrial society
- Administrative/political structures increasingly favor technical elites

Reference: pp. 167-170, particularly Bertram Gross's concept on p. 169

Technological Extrapolationist: Institutions & Goals

Institutional Changes

- Corporate-bureaucratic dominance: Increasing concentration of economic and political power in large, transnational entities
- Democratic governance erodes: Technical expertise prioritized over participatory processes
- Regulatory capture: Institutions meant to control corporate power become captured by the entities they regulate
- Media as control mechanism: Information increasingly managed to maintain system stability

Individual/Social Goals

- Identity defined by institutional roles: Person evaluated by productive contribution to system
- Material metrics dominate: Success measured by consumption, production, efficiency
- Meaning subordinated to function: Instrumental view of human purpose
- Motivation externalized: Behavior shaped through engineered incentives rather than intrinsic values

Based on Chapter 7, pp. 167-170

Evolutionary Transformationalist Characteristics & Trends

- **Balance of Rationality & Intuition:** Integrates empirical/analytical thinking with intuitive/spiritual dimensions; transcends the purely objective stance of industrial paradigm
- **Decentralization:** Distribution of political and economic power to foster participation at all levels; counters concentration trend of technological society
- **Diversity & Plurality:** Greater variety of living environments, social forms, and cultural expressions; embraces experimental approaches to social organization
- **Steady-State Economics:** Moves beyond growth orientation toward stable, sustainable systems with minimal income/wealth disparities; ecological balance prioritized
- **"Do More With Less" Technologies:** Emphasis on appropriate scale, resource efficiency, recyclability; technology serves human development rather than vice versa
- **Participatory Planning Networks:** Multi-level, inclusive decision processes; reconnects means and ends of governance
- **Moral Science & Economics:** Explicit values orientation; progress defined by human fulfillment and ecosystem health rather than material accumulation

Evolutionary Transformationalist Consequences

Transition Dynamics

- Short-term disorder yielding long-term adaptability and fulfillment
 - Creative destruction of outdated institutions; temporary social disruptions
 - Higher levels of psychological and social resilience emerge over time (ref: pp. 173-177)
- Balance of apparent opposites – decentralization with coordination, diversity with coherence

Social Structures

- Recreated family and community systems
 - Extended families and intentional communities as human development resources
 - Multi-generational support networks replacing institutional care
- Redesigned settlements: human-scale cities, eco-villages, bioregional planning

Economic Transformation

- Work reconceived as creative vocation rather than mere employment
 - Integration of work-play-learning into meaningful life activity
 - End of artificial work-leisure dichotomy; purpose-driven occupations
- Learning society with continuous development and adaptation
 - Social planning and learning as central activities for all citizens
 - Greater honesty, trust, and openness in complex coordination

Evolutionary Transformationalist Institutions & Goals

Institutional Transformation

- Delegitimation of large, impersonal institutions; legitimation of those enabling human fulfillment
- Corporations repositioned as public-benefit agencies with broader accountability
- "Relatively autonomous sub-systems" oriented toward human growth

Authority & Democracy

- Decision-making relocated to more local and participative levels
- Participatory democracy expanding beyond voting to ongoing civic engagement
- Experimentation with new governance forms; increased transparency in planning

Core Goals & Values

- Self-actualization as foundation; institutions serve human development
- Integration of work-play-learning as interconnected "vocation"
- Ecological ethics (partnership with nature) and humanitarian values prioritized
- Emphasis on meaning, community bonds, and human potential development

Ref: pp. 174-176 - Delegitimation of impersonal institutions, expanded participation, and self-realization ethic

Side-by-Side Comparison

Technological Extrapolationist		Evolutionary Transformationalist
Governance	Centralized control; expertise-driven; top-down management of complexity	Participatory engagement; distributed decision-making; collaborative governance
Economics	Perpetual growth; material maximization; resource exploitation; GDP-focused metrics	Steady-state sustainability; qualitative development; resource stewardship; well-being metrics
Values	Efficiency; optimization; productivity; standardization; specialization	Fulfillment; self-actualization; creativity; diversity; integration
Social Control	Surveillance; behavioral engineering; predictive algorithms; "friendly fascism"	Trust; voluntary cooperation; transparency; self-regulation; autonomy
Structure	Hierarchical; bureaucratic; consolidated; rigid; institutionally-centered	Networked; adaptive; decentralized; flexible; human-centered

Decision Criteria

While the technological path may offer short-term stability and efficiency, the transformationalist approach prioritizes three crucial criteria for long-term viability: resilience (adaptability to unexpected challenges), justice (equitable distribution of resources and opportunities), and meaning (integration of human purpose and fulfillment). These criteria suggest that despite potential transition difficulties, the evolutionary path offers greater sustainability and human flourishing.

References: Tables 8-10, pp. 166-168

Ch. 8 Overview: Guidelines & Strategies for Transformation

The final chapter offers a roadmap for fostering societal transformation without catastrophic disruption, guided by the recognition that "the necessary condition for a stable society in the medium-term future is that institutions shall have transformed themselves to be compatible with the new image."

Core Goal

To facilitate a non-catastrophic transition toward a society compatible with the emerging integrative, evolutionary image of humankind—avoiding both the economic collapse and garrison-police state scenarios that could result from image-institution mismatches. *(ref: pp. 183-184)*

Strategic Framework

The chapter provides a systematic approach to transformation through a five-part structure: foundational premises that frame the challenge; comparative strategies (restorative, stimulative, manipulative, persuasive, facilitative); essential conditions for resolution; elements for non-catastrophic transition; and specific action recommendations. *(ref: pp. 185-199)*

Facilitative Emphasis

Rather than advocating manipulative or purely persuasive approaches, the authors emphasize facilitative strategies that foster emergence of the new image and support pluralistic experimentation, prioritizing human development and long-term preservation of civil liberties while navigating the complexities of the transition period. *(ref: pp. 186-188)*

Practical Pathways

The chapter concludes with actionable recommendations spanning awareness campaigns, participative planning networks, institutional experiments, research into consciousness and values, and development of "new senses of the mind"—all designed to support an adaptive transition that fosters both individual fulfillment and societal resilience. *(ref: pp. 194-199; Appendix E)*

Five Foundational Premises

- **Premise 1:** Pressing dilemmas require a new image of humankind. A set of interrelated fundamental challenges (ecological, social, economic) demand for their resolution a drastically changed image of human nature and potential.
- **Premise 2:** A new image is already emerging. While challenging to the dominant scientific worldview, it has deep historical roots in religious and perennial wisdom traditions spanning thousands of years.
- **Premise 3:** There exists a serious mismatch between modern industrial culture/institutions and this emerging image. This mismatch risks social disruption, economic decline, and even institutional collapse—though institutions can adapt, albeit through a potentially traumatic transition.
- **Premise 4:** Deep psychological resistance to both the new image and its implications is inevitable. No aspect of a person's belief-value system is as resistant to change as their basic sense of identity and self-image.
- **Premise 5:** The characteristics described in Chapter 5 (holistic, ecological, self-realizing, integrative, balanced, experimental) are pivotal. Their realization may determine whether undesirable futures (economic collapse, garrison-police state) can be avoided.

Based on premises outlined on pp. 183-186

Strategy Types: Restorative & Stimulative

From the five transformation strategies discussed in Chapter 8, these two represent contrasting approaches to change:

Restorative Strategy

- Attempts to revive or restore past institutions, images, symbols, and approaches
- Often emerges early in societal stress periods as first response to disruption
- Examples: Return to "traditional values," revival of religious fundamentalism, neo-classical economics
- Effectiveness: Generally inadequate for addressing advanced crises that require fundamental restructuring
- Historical pattern: Usually insufficient when the crisis stems from fundamental paradigm mismatch

Stimulative Strategy

- Actions designed to stimulate or seed emergence of "premature" alternatives
- Anticipates new paradigms before they become mainstream or accepted
- Examples: Experimental communities, alternative technologies, new economic models
- Focuses on actions that experiment with forms appropriate to emerging conditions
- Most effective when existing structures are increasingly perceived as inadequate

Reference: pp. 186-188 (discussing all five strategic approaches to transformation)

Strategy Types: Manipulative, Persuasive, Facilitative

Alternative Approaches to Transformation

- **Manipulative Strategy:** Uses coercive control or reduction of individual freedoms to alter institutions, values, or behaviors
 - Can be direct (laws, regulations) or indirect (media manipulation, confrontation politics)
 - Fundamentally incompatible with self-realization ethic and human development goals
 - Likely counterproductive for desired transformation; reinforces resistance
- **Persuasive Strategy:** Employs messaging and advocacy to convince others of the rightness of new images and concepts
 - Essential in democratic political processes and policy development
 - Effectiveness limited in periods of low institutional trust and social division
 - Risks becoming manipulative if falling short of authentic dialogue
- **Facilitative Strategy:** Focuses on enabling and supporting the emergence of new images and patterns
 - Not about speeding up or slowing transformation, but reducing social disruption
 - Emphasizes understanding, accurate information, and support during transition
 - Most compatible with characteristics of adequate image (open-ended, integrative)
 - Preserves autonomy and participation; builds resilience through diversity

While all three strategies occur naturally in society, the authors recommend facilitative approaches as most compatible with both transformation goals and ethical requirements (pp. 186–188)

Essential Conditions for Resolution

New Scarcity

- Accept planetary limits and finite resources
Shift from growth to frugality, ecological balance

Full & Valued Participation

- Beyond makework to meaningful contribution
Solve unemployment/underemployment through genuine societal roles

Control Dilemma

- Effective planning without authoritarianism
Balance coordination needs with democratic liberty

Equitable Resource Distribution

- Global justice becomes practical necessity
Sharing as stability requirement, not just moral duty

Moral Economics

- Participative system compatible with ecological/social sustainability
Beyond GDP toward well-being metrics

Meaningful Work

- Prioritize full and valued participation
Work-play-learning integration, expanded sense of vocation

Tolerance for Diversity

- Experimentation with alternative lifestyles and institutions
Reduces tension between progressive and conservative impulses

Politics of Righteousness

- Ethics and public responsibility in private/public sectors
Institutional accountability, incentives for ethical behavior

Inner Life Research

- Systematic exploration of subjective experience
Legitimate scientific/social investigation, not just fringe pursuit

Temporary Controls with Safeguards

- Accept transition-period regulations
While rigorously protecting long-term civil liberties

Reference: "Changing Images of Man", pp. 192-199

Elements for Non-Catastrophic Transition

A Strategic Framework for Societal Transformation

- **1. Promote awareness and dialogue** about the inevitability and direction of transformation
 - Foster public understanding that change is unavoidable; focus on shaping its direction
- **2. Construct a guiding vision** combining new image of humankind with suitable social paradigm
 - Develop operational characteristics: participative economics, valued social roles, planning networks
- **3. Foster experimentation and tolerance** for diverse alternatives in lifestyles and institutions
 - Reduce tension between progressives and conservatives through pluralistic approaches
- **4. Encourage ethics and public responsibility** in both private and public sectors
 - Reform institutional arrangements and incentives to enable more ethical behavior
- **5. Promote systematic exploration of inner life** and subjective experience
 - Legitimize consciousness research within scientific and educational frameworks
- **6. Accept time-bound social controls** while safeguarding long-term freedoms
 - Temporary regulation to prevent breakdown; ultimate goal is protection of civil liberties

Source: Chapter 8, pp. 194-199

Action Recommendations (with Appendix E tie-ins)

Public Awareness & Planning

- National/global awareness campaigns
Educational materials on transformative processes and choices
Public forums for dialogue about societal directions
- Multi-level participatory planning networks
Coordinated frameworks across local, regional, national scales
- Systems modeling/simulations
Complex social-environmental problem mapping and scenario testing

Institutional Experiments

- Public-benefit corporations
New corporate forms balancing profit with social responsibility
- Community prototypes
Alternative lifestyle demonstration projects and eco-villages

Research Areas

- Values/ethics evolution studies
How ethical systems adapt to changing conditions and technologies
- Cooperation dynamics research
Conditions fostering cooperative vs. competitive behavior in groups
- Mass media utilization
Study of how media can support positive transitions rather than reinforce old images

Consciousness Methods

- Direct investigation techniques
Biofeedback, hypnosis, meditation, psychedelics under protocol
- "New senses of the mind"
Development of capacities for perception beyond ordinary consciousness
Environmental impacts on psychosomatic systems and health

Reference: Ch. 8, pp. 194-199; Appendix E, pp. 235-238

Summary: Key Findings & Challenges

This study has examined how fundamental images of humankind shape society, policy, and individual experience. As we conclude, three central findings emerge about the transformational challenge ahead:

1

Industrial Images: Success & Mismatch

The mechanistic, rational, individualistic "Economic Man" image enabled unprecedented material prosperity and technological advancement throughout the industrial era. However, this image now creates critical mismatches with both planetary constraints (ecological limits) and higher human needs (meaning, community, participation, creativity).

2

Characteristics of an Adequate Image

A future-viable image of humanity must be **holistic** (integrating self-society-universe), **ecological** (partnership with nature), **self-realizing** (supporting human fulfillment), **multi-dimensional** (integrating diverse perspectives), **balanced** (coordinating multiple values), and **open-ended** (embracing evolution).

3

Transition Risks & Opportunities

Society faces a pivotal choice between two paths: a managed technological society with increasing control, surveillance, and material focus; or a creative transformation toward participatory, ecological, and meaning-centered institutions. The transition will be disruptive either way, but offers the opportunity to consciously evolve our shared image of humanity.

The Challenge Ahead

History offers little comfort that humanity can orchestrate such a profound transformation without crisis. Yet the awareness that our fundamental images drive our collective destiny offers leverage for conscious evolution toward more humane and sustainable futures.

References: pp. 201-204 (Summary section)

Appendices Highlights & Closing

A Alternative View of History (Elise Boulding)

Critiques the evolutionary model, emphasizes spiritual traditions and family structures, offers alternative historical interpretations, and proposes a "third image" blending rational and spiritual approaches.

B Information Systems and Social Ethics (Geoffrey Vickers)

Explores the revolution in science distinguishing energy from information, and examines how ethics emerge and evolve through social communication systems.

C Modified Reductionism (Henry Margenau)

Addresses the "levels of explanation" controversy, arguing for limited reducibility between scientific domains while preserving the unique properties of higher organizational levels.

D Scientific vs. Everyday Images (Dubos/Cahoon)

Argues that science has not fundamentally changed the "man in the street" image and reflects on the widening gap between professional/scientific and popular conceptions.

E Projects for Support

Lists potential research and policy initiatives including global systems planning, institutional experimentation, ethics research, and development of new scientific and psychological paradigms.

F SP(I)N Networks (Virginia H. Hine)

Presents the concept of Segmented Polycephalous (Ideological) Networks as an emergent model for organizational and social structure, contrasting with bureaucratic models.

Closing Perspective

The transformation of our foundational images of humankind represents perhaps the highest leverage point for addressing contemporary challenges. Neither purely academic exercise nor mere cultural critique, this work on images serves as a practical foundation for reimagining institutions, policies, and human possibilities in service of a more humane, ecological, and fulfilling future.

References: Appendices A-F, pp. 219-249